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STORY-TELLING, QUESTIONING AND STUDYING

THREE SCHOOL ARTS

BY

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NEW YORK UNIVERSITY

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To

JULIA, BETSY, BILLIE, AND IDA

WHO LOVE STORIES

ASK QUESTIONS, AND ARE LEARNING

HOW TO STUDY

PREFACE

In 1900 Colonel Parker spoke before the National Education Association on "Art in Everything."

Art is a fundamental need of life. It is a mode of self-expression. It is one of the secrets of growth. It is a source of joy in work. It takes the sting out of drudgery. It makes something sing in the heart. It, and not money, is that by which the souls of men live; by money the body lives, or dies. It removes tedium and delays fatigue. Not merely to enjoy works of art, but to make life in some sense an æsthetic accomplishment is a requisite to complete living.

We need to socialize art. We have allowed a class in society to express itself in art forms and to joy in the expression. This is what all members of society should do, each in his own

way. Social conditions will in time be changed to allow it.

Each type of artist contributes a new pleasurable quality to life. The painter, the poet, the musician, the sculptor, the architect, the landscape gardener, the actor, the dancer, the story-teller, — each in his own way increases the sum of human happiness.

The teacher, too, is an artist, or may be. His part is to make living itself complete, beautiful. In his address on "The Art of the Teacher," given when United States Commissioner of Education, Chancellor Brown said, ". . . the fine art of the teacher deals with real things on their ideal side."

Every child is an artist. The teacher opens the door to æsthetic enjoyment and expression for the child. This he does by living art in the presence of his pupils. His methods have the æsthetic stamp. His achieving is beautiful. Through æsthetic teachers life itself will in time become beautiful, harmonious, spontaneous, free, organized. Beauty is the foe of injustice, evil, error, ugliness, disease, and war.

As teachers we need to awaken to the fact that life in the making is in our hands. If we are the artificers of life we ought to be, not again after one generation will the face of humanity be marred. Had we been a voice and not an echo for the past generation, the present world-tragedy could not have been.

Three main school arts are story-telling, questioning, and studying. Story-telling belongs in the upper grades and in the high school as well as in the lower grades and in the kindergarten, where it is domiciled at present. Questioning belongs in college and university, if the classes are fortunately small enough in size, as well as in secondary and elementary schools, where it has been the teacher's staff since the days of printing. Studying aright belongs in the lower grades and even in the kindergarten, for young children have to face their little problems and try to solve them, as well as throughout the subsequent stages of learning and living. In fact, these three are universal school arts. They are a part of the technique of all teaching as a craft.

Yet these arts have to be adapted to the age of the pupil. The following pages, however, have had all ages in mind. Consequently those who read for practical guidance only will find a few pages here and there which they will prefer to omit. Those who read all, for the sake of the subjects themselves, whether they be apprentices, journeymen, or masters, will probably find nothing unintelligible, though it be unusable.

May these and other arts of the teacher be so well done that teaching becomes in a measure a fine art? Perhaps so.

The content of these studies has been given in lecture form from time to time in the Extra-Mural courses for teachers of New York University in Brooklyn, Newark, and Paterson, and is the better for the sympathetic criticism therewith accorded them.

H. H. H.

Leonia, N.J.,
December 30, 1915.

ANALYTIC TABLE OF CONTENTS

CHAPTER I

THE ART OF STORY-TELLING

PAGE

I. INTRODUCTION 19
1. Civilization and Story-Telling . . . 19
2. Present-day Revival of the Story . . . 20
3. Illustrations of Stories 22

II. DEFINITION OF THE STORY 23

III. THE FORM OF THE STORY 26

IV. THE PURPOSE OF STORY-TELLING 28
1. As Art 28
2. Lincoln as a Story-Teller 29

V. THE IMPORTANCE OF THE STORY 31
1. The Tool of Primitive Man 31
2. The Simplest Vehicle of Truth . . . 34
3. Adaptability of its Form 36

VI. THE CHARACTERISTICS OF THE GOOD STORY . . 37

VII. HOW TO TELL A STORY 40
1. With Personal Magnetism 40
2. In its Setting 41
3. From the Child's Standpoint 41
4. Imaginatively 42
5. Dramatically 42
6. Feelingly 43
7. Self-forgetfully 43
8. With Indirection 43

PAGE

VIII. The Reactions of Children on Stories . . 45
1. Teaching by Expression 45
2. Re-telling Stories 46
3. Illustrating and Dramatizing 46

IX. The Place of the Story in Education . . 48

X. Final Suggestions 49

XI. References 53
1. Where to Find Stories 53
2. How to Tell Stories 54
3. Lists of Graded Stories 55

XII. Questions 60
1. On the Art of Story-Telling 60
2. For Further Study 60

CHAPTER II

THE ART OF QUESTIONING

I. Introduction 62
1. Plato on Questioning 62
2. Outline of this Chapter 63

II. The Importance of Questioning 64
1. A Main Mode of Teaching 64
2. The Time it Consumes 64
3. An Aid in Securing Attention . . . 65
4. An Aid in Class Management . . . 65
5. Essential to Good Teaching 66

III. The General Purposes of Questioning . . 67

IV. The Kinds of Question 68
1. The Auxiliary Question, with Illustrations . 68
2. The Searching or Heuristic Question, with Illustrations 70
3. The Review Question, with Illustrations . 74
4. The Examinational Question, with Illustrations 77

PAGE

V. THE MANNER OF QUESTIONING 80
1. With Sympathy 80
2. Question before Pupil 80
3. No Predictable Order of Pupils 81
4. But Little Repetition 81
5. With Deliberation 82
6. When to Ask General and Specific Questions 82

VI. THE FORM OF THE QUESTION 84
1. Clearness 84
2. Brevity 85
3. Good English 85
4. The "Yes" or "No" Answer 86
5. No "Leading" Question 86

VII. THE CONTENT OF THE QUESTION 87
1. Stimulating 88
2. Definite 88
3. Essential 89
4. Logical 90
5. Thought-provoking 90
6. Suited to Individual Capacity 91

VIII. THE QUESTIONER 91
1. Prepare in Advance 91
2. Analytic 92
3. Practical 92
4. Elicit the Best 93
5. Be Ready to Answer 94
6. Self-critical 96
7. Study the Literature 97

IX. THE ANSWER 97
1. The Pupil's Reaction 98
2. Good Language 98
3. Correctness 98
4. Oral and Written Answers 99
5. How to Treat the Incorrect Answer . . 99
6. Answers to be Discouraged 100
7. Examples of Natural Humor in Answers . 101

PAGE

X. Great Questioners 103
1. Socrates 103
2. Jesus 107
3. Dr. Mark Hopkins 111
4. The Skilful Lawyer 111

XI. The Larger Questions 114

XII. References on the Art of Questioning . . 114

XIII. Questions 115
1. On the Art of Questioning 115
2. For Further Study 116

CHAPTER III

THE ART OF STUDYING

I. Introduction 118
1. The New Interest in this Subject . . . 118
2. Present-day Waste in Education . . . 119

II. Definition of Study 120
1. Too Narrow a Definition 120
2. Statement of the Definition 121

III. General Presuppositions of Study . . . 122
1. The Life of Study 122
2. Many Interests 123
3. Independence 124
4. The Love of Truth 125
5. The Habit of Study 127
6. The Ideal of Study 128

IV. Mechanical Aids to Study 129

V. Physical Conditions of Study 131

VI. How to Study 134
1. Three Related Questions 134
2. The Herbartian Formula 134

PAGE

3. Four Phases of the Study Process . . . 136
4. How Shall I Study? 139
   (1) The Problem 139
   (2) The Hunt 139
   (3) The Solution 140
   (4) Its Use 140
5. Comparison with McMurry's List . . . 141

VII. How to Study a Text 143
1. Definition of Need 143
2. Analysis 144
3. Synthesis 146
4. Application 147

VIII. Training Pupils to Study 148
1. Difficulties in Learning to Study . . . 148
2. At What Age Should Such Training Begin? 149
3. "When and Where Shall the Child Study?" . 150
4. How the Training Should be Done . . 151
   (1) Study with the Pupils 151
   (2) Sensing the Problem 153
   (3) Hunting for the Solution 153
   (4) Recognizing the Solution 154
   (5) Using the Solution 154
   (6) Enlist the Aid of Parents . . . 155

IX. Influence of Good Teaching on Studying . 157
1. Various Methods Repeat the Factors in Study 157
2. Use of the Psychology of Learning . . 159
3. Right Attitude toward Texts 160
4. Variety of Presentation 161
5. Right Examinations 162
6. Place Responsibility on Pupils . . . 163
7. The Teacher must be a Student . . . 163
8. Consequent Principles of Teaching and Studying 165

X. The Five Results of Study 166

PAGE

XI. THREE PROBLEMS RELATED TO THE ART OF STUDY 167
1. Mastering a New Book 167
2. Making Notes 169
3. Writing a Paper 169

XII. GUIDING THE STUDY PROCESS 171

XIII. REFERENCES ON THE ART OF STUDY . . . 174

XIV. QUESTIONS 175
1. On the Art of Studying 175
2. For Further Study 176

STORY-TELLING, QUESTIONING AND STUDYING

STORY-TELLING, QUESTIONING, AND STUDYING

CHAPTER I

THE ART OF STORY-TELLING

CIVILIZATION is hard on story-telling as on the other simple arts of primitive man. The transmission of culture by oral tradition has been supplanted by the printed page. The exactions of modern business leave little time and less inclination to the father to regale the souls of his children with tales told him when he was a boy, or even of the happenings of his own boyhood. The club-life in cities often separates father, and sometimes even the mother, from the children at the bedtime hour. The cellar furnace and the gas log are the poor substitutes of modern life for the old open fireplace. The result is that story-telling as an art is in danger of vanish-

Civilization and Story-telling

ing from our modern life, and with it much of the joy and culture of the olden time.

The Revival of the Story

Yet it is still true that the hearts of children hunger for fairyland and their souls thirst for the elemental racial happenings, and amply rewarded are the parents and teachers who satisfy them. The revival of story-telling will contribute something toward keeping young and fresh a nervous and fatigued civilization. In the older simpler countries the story as a medium of instruction and entertainment still survives, as in India, Arabia, Persia, Norway, and South America. It is not a fatuous delusion to suppose that a custom so nourishing to the human soul, and yet so endangered by our mode of life, may be preserved by diligent effort.

So at least think the members of the Story-Tellers' League,[1] and so think the kindergartners. The disciples of Froebel have helped save the story to our generation. The Boy Scout movement with its camp-fire and tales may

[1] For information address R. T. Wyche, Everett House, New York, or *The Story Hour*, 3320 Nineteenth St., N. W., Washington, D.C., or *The Story-Teller's Magazine* 27 W. 23d St., N. Y. City.

also be expected to help perpetuate the story. Thompson Seton makes his hearers feel the magic of the camp-fire, and concerning the open fire John Burroughs has written:

> The open fire is a primitive, elemental thing. It cheers with more than mere heat; it is a bit of the red heart of nature laid bare; it is a dragon of the prince docile and friendly there in the corner. What pictures, what activity, how social, how it keeps up the talk! You are not permitted to forget it for a moment. How it responds when you nudge it! How it rejoices when you feed it! Why, an open fire in your room is a whole literature. It supplements your library as nothing else in the room does or can.

Both the public libraries and the playground associations are also helping to revive the art of story-telling in our day. The quantity of the new literature on this subject is surprisingly large. So long as society preserves the childhood of the children, the fascination of "Once upon a time" will remain, and it will be an ominous day for society when, through either haste or neglect, its children are not allowed to revel in the world's imaginings. Premature senility is the effect of an undeveloped imagination in child or nation.

We may approach our subject by naming certain illustrations of stories that will naturally be in the minds of story-tellers. The primitive life of the Indian is portrayed in the epic Hiawatha. The animal world as envisaged by the negro imagination is presented in Uncle Remus. The early Saxon life is embodied in the grand epic of Beowulf. The marvellous prehistoric civilization of Greece appears in Homer. The exuberant Oriental imagination has fashioned for the world's children the Arabian Nights. For moral directness the Hebrew stories preserved in the Old Testament, likewise Oriental, are incomparable. Then there are the cosmogonies of primitive peoples, as in Hesiod, the mythologies of Greece, and the Norse sagas. The fables of Æsop, despite the *hæc fabula docet*, satisfy a boy's mind at a certain age, as many adults can testify. La Fontaine is a good second to Æsop. The Middle Ages, welding new peoples with an older civilization, produced the Spanish Cid, the French *Chanson de Roland*, the German *Niebelungen*, and the British King

Illustrations of Stories

Arthur. The term "story" is so comprehensive that even ordinary illustrations, examples, incidents, and happenings may be used for the purposes of story-telling, though they necessarily lack the racial flavor so essential for best results.

Definition of the Story

If we search through the preceding illustrations with a view to finding the genus of literature to which they belong and the marks distinguishing the story from other species of the same genus, as the logic of definition requires us to do, we may agree to define the story as *a free narration, not necessarily factual but truthful in character.* The story is not history, though there may be historical stories, but it is an imaginative invention. The terms "story" and "history" are indeed derived from the same root, meaning inquiry and what is learned thereby, but for us history tells us what happened at a definite place and time, while the story tells us only what might have happened at some indefinite place and time. What Aristotle said of poetry in comparison with history is also true of the

story, — poetry, he said, is truer than history. This paradox is resolvable if we compare the poetry of Homer with the history of Herodotus; the one is universal, the other is local. The story gives us human nature in its bold outlines; history, in its individual details. Similarly Canon Cheyne has remarked in comparing the Psalms with the Acts: "Good as the truth of history may be, the truth of poetry may for purposes of edification be even better." Truth is stranger than good fiction just because the fiction is bound by the traits of universal human nature, whereas truth is bound only by the individual facts which vary widely from the general average. Nothing in all Tolstoi's novels, highly imaginative as they are, is quite so strange as his own actual exit from this world. The story as a narrative is free, because it is not bound by spatial and temporal details, as is history, but the story is truthful in character because it portrays human nature as it is generally. We are not concerned with the country in which "Cinderella" lived or the year in which the "Ugly Duckling" was born.

The distinction which the definition makes between the factual and the imaginative is emphasized because the child's mind at about six years of age begins to make the same distinction. Those telling stories to young children will often have had the question put to them by the inquiring mind of some child: "Did it really happen?" In answering this question it is very important not to label the the story as history. When the child's mind has distinguished between fancy and fact, it is time for parent and teacher to do the same. To say frankly: "It is only a story" will, on the one hand, not detract much from the child's pleasure in it, while, at the same time, it helps him realize his real world; besides, it will later prevent the process of undermining his faith, sure to follow upon the early blind acceptance of the story as literally true. Follow nature's leading in making the transition from childhood's natural credulity to manhood's natural criticism. A fond father said to his little girl: "Come here and let me tell you how God made the world." She said, with open eyes, "Papa,

do you know?" "I know a story that tells," was the satisfying answer. When children are disappointed that the story is not really true, they may be told realistic, factual, historic narratives instead.

The Form of the Story

Closely associated with the definition of the story is the account of its form. Independent of the content which the story carries, and which may vary from history to nonsense, is the form of the story which is practically the same in all stories. The content is varied and particular, the form is the same and universal. Now there are four main elements in the form of each story, viz. the beginning, the development, the climax, and the end. In this respect the story is very much like the drama with its four or five acts, first setting forth the characters, then unwinding the plot, then the climax, and finally the results. As Professor St. John [1] expresses it: "To summarize, every good story must have a beginning that rouses interest, a succession of events that is orderly

[1] E. P. St. John, Stories and Story-Telling, p. 13, Boston, 1910.

and complete, a climax that forms the story's point, and an end that leaves the mind at rest." To fix these four features of the story's form in mind will help us understand the nature of the story, will help us also to remember it and to tell it again. It is better not to memorize the words of a story, leaving something to spontaneity in the telling, but the framework of the story we are to tell should be in mind.

For example, in Hawthorne's story: "The Great Stone Face," the beginning acquaints us with the Great Stone Face, Ernest, his mother, and the prophecy; the development brings before us Gathergold, Old Blood-and-Thunder, and Old Stony Phiz, as well as the poet; the climax is reached in the exclamation of the poet: "Behold! Behold! Ernest is himself the likeness of the Great Stone Face"; and the end shows us the effect on Ernest of the recognition. The four elements in the form of the story can be similarly found in other familiar stories.

It follows from the definition of the story that its purpose is not primarily to give infor-

mation, but to nurture the soul; that is, to expand the imagination, to widen the sympathies, to give pure pleasure. The story is the child's vicarious experience of reality, that is, it is an imaginative substitute for real experience. The story as an art form of literature is a thing of beauty primarily. It should be told for the joy it gives to the narrator and the listener. Whatever information it carries, even whatever conduct it prompts, are incidental, though important, accompaniments of the story as told. Tell the story well and it will unlock to you the child's heart and, by nurturing his soul, it will prepare him to understand and enjoy all literature as an exposition of life. Many subjects in our curriculum as taught repress individuality and personality; the story cultivates both.

The Purpose of Story-telling

Professor St. John [1] distinguishes seven aims in story-telling, as follows: to entertain, to guide reading, for language-study, for intellectual discipline, for illustration, for æsthetic culture, and for character-formation.

[1] E. P. St. John, Stories and Story-Telling, Chap. XI.

These seven are all phases of the one great aim of soul-development. In the words of the great modern inspirer of story-tellers, Froebel: "Ear and heart open to the genuine story-teller, as the blossoms open to the sun of spring and to the vernal rain. Mind breathes mind; power feels power, and absorbs it, as it were. The telling of stories refreshes the mind as a bath refreshes the body; it gives exercise to the intellect and its powers; it tests the judgment and the feelings."[1] It is characteristic of Froebel to use such expressions as "mind breathes mind, power feels power"; they seem vague, but the real story-teller knows there is a meaning in the words.

Lincoln as a Story-teller

Lincoln illustrates the more practical uses to which story-telling may be put. Richard Watson Gilder[2] presents this side of the great story-teller as follows: "Colonel Burt reports a strange interview with Lincoln at the Soldiers' Home at a time of keen anxiety and when a person

[1] Froebel, Education of Man, p. 307 (Hailman Tr.), N. Y., 1900.
[2] "Lincoln the Leader," *Century*, Feb., 1909.

present had rudely demanded one of his 'good stories.' 'I believe,' said Lincoln, turning away from the challenger, 'I have the popular reputation of being a story-teller, but I do not deserve the name in its general sense; for it is not the story itself, but its purpose, or effect, that interests me. I often avoid a long and useless discussion by others or a laborious explanation on my own part by a short story that illustrates my point of view. So, too, the sharpness of a refusal, or the edge of a rebuke, may be blunted by an appropriate story, so as to save wounded feeling and yet serve the purpose. No, I am not simply a story-teller, but story-telling as an emollient saves me much friction and distress.'" Many another leader of men has found with Lincoln the great value of the story "as an emollient," especially if it be of the humorous type. To end an unsatisfactory conference with a pleasantry is to rise above it. This characteristic use of the story made by Lincoln may be illustrated by the following from Major W. S. Hubbell, famous as a teller of civil war tales:

Lincoln one day was visited by three men with a new gun device. Lincoln sent them to Secretary Stanton, who sent them back to Lincoln, who then sent them to a Congressional committee. After pursuing the President for some time, Lincoln finally stopped them before they began to speak of their invention. He had them sit down and then said:

"Let me tell you a story. This story is about a little boy who had to memorize the story in the Bible about the three men in the fiery furnace. He could not remember their names and got a last chance under a threat. The boy began well, but when he came to the three hard names, broke down and cried: 'There come those three old bores again.'" Lincoln finished the story there, and looked smilingly at the three inventors.

The Importance of the Story

The importance of the story as an educational instrument arises from three considerations, viz. its having been the tool of primitive man, its being the simplest vehicle of truth, and its being so flexible a literary form.

The Tool of Primitive Man

The story is primitive man's tool for transmitting his reactions upon his world. The first history and the first literature are stories. "It [History] was doubtless discovered in the first instance by the story-teller, and its purpose has usually

been to tell a tale rather than to contribute to a well-considered body of scientific knowledge." [1] Such primitive transmission is oral, all unessential details drop off in the process of repetition generation after generation. The world of primitive man is partly natural and partly human, and so his stories include both myths and legends. The myth is his reaction upon the natural world and legend his reaction upon the human world, especially the past of his own tribe or people. An illustration of the story as the tool of primitive man we see in the following quotation from one who knows by experience.

"Very early, the Indian boy assumed the task of preserving and transmitting the legends of his ancestors and race. Almost every evening a myth, or a true story of some deed done in the past, was narrated by one of the parents or grandparents, while the boy listened with parted lips and glistening eyes. On the following evening, he was usually required to repeat it. If he was not an apt scholar, he

[1] J. H. Robinson, The New History, p. 27, N. Y., 1912.

struggled long with his task; but, as a rule, the Indian boy is a good listener and has a good memory, so that the stories were tolerably well mastered. The household became his audience, by which he was alternately criticized and applauded."[1]

We must not thoughtlessly identify present savages with primitive man, yet present savages do provide us with many concrete illustrations of what we know to be true of primitive man. Thus an African missionary writes of his experiences in a native village: "We will now ask the king for some stories, and you will find that he has an abundance of them. The Bulu have a wealth of spoken literature, rich in fables and fairy tales. They love them and will take delight in relating them to you by the hour, if you have time to listen. Even the little children are well versed in these. They have their own story of the creation and fall of man, of the good and bad hereafter, all of which are intensely odd and interesting."

[1] C. A. Eastman, Indian Boyhood, p. 51, N. Y., 1902.

The fact that the story is the product of primitive man explains in part why the children hunger so for the story and find their keenest satisfaction in the racial stories. The modern child individual is calling for the soul-food of the ancient child race of primitive men. To deny them this pabulum is to dwarf the soul-stature and to induce premature maturity.

Second, we said the story is important because it is the simplest vehicle of instruction for undeveloped and untutored minds. It fits the modes of comprehension of minds just feeling their powers as nothing else does, making little draft upon the abstract and intellectual functions of mind. The story is an arrow feathered with truth finding its way easily to its target.

The Simplest Vehicle of Truth

In speaking on "The Place of Formal Instruction in Religious and Moral Education" President Hall[1] said concerning the story:

President Hall quoted

"Formal moral and religious instruction at home should, of course, begin with stories, very simple, brief,

[1] G. Stanley Hall, *Proc. R. E. A.*, 1905, pp. 69–70.

and oft-repeated at first, and rapidly increasing in number, kind and complexity, as the child's intelligence expands. Stories are the oldest form of transmitted culture and the most formative. All should have a moral more and more disguised and implicit as the child advances in years, but the moral should be ever present for sentiments, will, or both. I suspect and challenge the word 'formal' in my topic if it involves, as it does with too many pedagogues, anything methodic. It should at first be as free as possible from every element of didacticism, systematic sequence, or the drill factors of the precisian. Form should be utterly subordinate to content, and the tales should be of the greatest possible number and variety. Young children need elemental story-roots, picturing all the elemental good and evil in the world; all these, of which the kindergarten has a very precious kit, though far too few, too elaborated, and selected from too narrow a range, the child needs, and for these its moral appetite is voracious. Every mother should be a story-teller and her repertory should be large, well-chosen, and ever replenished, and the father should take his turn. What else was the twilight hour, and the fireplace (where that still survives!) made for? Tales are the natural soul-food of children, their native breath and vital air; but our children are too often story-starved or charged with ill-chosen or ill-adapted twaddle tales. Good tales, well told, preform the moral choices of adult life aright. Many Bible stories are among the best, but these are not enough and there are not enough adapted to any age, so we should go outside, and draw on other sources.

Third, the importance of the story is made manifest in that as a literary form it lends itself to any content. The story is not history, but there may be historic stories; the story is not science, but there may be scientific stories; the story is not ethics, but there may be moral stories. When history, science, and ethics drop their generalizations, become concrete, appeal to the imagination and to the feelings, exciting admiration or censure, and prompting changes in conduct, they become stories. What history becomes as story Plutarch can show; what science becomes as story modern animal stories illustrate, *e.g.*, those of Thompson Seton; and what ethics becomes as story Æsop and La Fontaine witness. By adopting this form history, science, and ethics lose nothing for the child, though they do for the adult, and gain much for all. For further illustrations of the use of the story in historic and moral instruction, see the references to the works of Miss Gowdy and Mr. Gould respectively at the end of this chapter. In view of the significance of

The Adaptability of the Story's Form

the story to the primitive mind of the race and of the child, of its truth-carrying power, and of the flexibility of its literary form, we realize the importance of the story; and in view of the importance of the story, should we fail as parents and teachers and friends of children to cultivate the story-teller's art?

Characteristics of the Good Story

The good story is the one that appeals to the unperverted taste of children. Even the stories that appeal to perverted tastes, such as the dime-novel hero and the mawkishly sentimental heroine, have some good qualities. What are the characteristics that make a story go? Miss Bryant [1] finds them to be three, — "action, in close sequence; familiar images tinged with mystery; some degree of repetition." St. John [2] also emphasizes the quality of action in a good story, and adds two other characteristics: suggestiveness and unity. Haslett [3] also mentions action, suggestiveness, and unity, as well as a number

[1] S. C. Bryant, How to Tell Stories to Children, p. 48.
[2] E. P. St. John, Stories and Story-Telling, Chap. V.
[3] S. B. Haslett, Pedagogical Bible School, pp. 244–245.

of other characteristics, such as plot, narrative, richness of material, adherence to original, moral and character elements, and emotional coloring.

Mr. Chesterton[1] has shown us the importance of "adherence to original." Through lack of such adherence, Milton, Goethe, and Wagner are guilty, he thinks, of spoiling good stories. Of Milton's "Paradise Lost" he says, "The story, as it stands in the Bible, is infinitely more sublime and delicate." Of Goethe's Faust he says: "The old Faust is damned for doing a great sin; but the new Faust is saved for doing a small sin — a mean sin." Likewise the old story makes Tannhäuser go away in despair of being pardoned, while Wagner makes him return repentant a second time. "If that is not spoiling a story, I do not know what is." The point is that the old stories represent a simplicity and directness of moral quality which is softened into weakness in the later modifications. The originals represent racial experiences, the unfaithful copies show indi-

[1] Quoted in *Literary Digest*, "Spoiling Good Stories," April 16, 1910.

vidual opinions. Not that the story-teller should memorize the words of the original, but that he should retain its main qualities. The racial stories orally transmitted for generations are best just because they have lost in the process all that is not typical.

In addition to all the many qualities above indicated, we may note that good stories are very human, very concrete, very intelligible, and universal in their appeal. Human, because they are racial products; concrete, because the primitive mind did not express itself abstractly; intelligible, because of the elementary ideas conveyed and feelings aroused; and universal in their appeal because adults are children grown up without having lost entirely their ancestral inheritance. The four-page story of Dickens, "A Child's Dream of a Star," reveals several of these characteristics, such as quick action, the suggestion of the mysterious about the familiar, repetition, unity, plot, narrative, emotional coloring, character elements, concreteness, intelligibility, and universal appeal. Some of these traits can be

found in all the stories that children especially like.

How to Tell a Story

Story-telling is an art, a fine art. As in the case of other arts, the gift for story-telling must be inborn, but in addition the gift requires cultivation. We can dispense neither with heredity nor with training. But in giving directions for training ourselves in this art, we must limit ourselves to general principles of guidance, omitting too specific and detailed formulas, which would unduly cramp the personality of the story-teller and so tend to a mechanical procedure.

With Personal Magnetism

First of all, then, the personality of the story-teller must shine through the story, through its selection, its narration, and its appreciation. Tell the story with all the personal magnetism you can muster. Weave the spell of the story-teller's art. "Once upon a time" is itself the magical "Open Sesame" to the imagination and interest of the children.

If the story has a setting, get it in your imagination before beginning. It will help your

own appreciation of the story and your appreciation will pass on by contagion to the children. The setting of the story is like the frame to the picture, setting it off. The setting for Jotham's parable of the trees is the transition in Israel from a theocracy to a monarchy. The setting for Jesus blessing little children is the dusty roadside with the Master busy teaching and healing and the devoted disciples anxious to make his work as easy for him as possible. The story should not be prefaced formally with the setting, but the setting should be in the mind of the story-teller and may be informally introduced as the narration proceeds.

In its Setting

Take the point of view of the children as you tell the story. Tell it in fact as a child would tell it, with improvements. In order to do this, you must study the stories children tell, and see their simplicity, directness, and swiftly moving action. You must also like children and understand them. The teacher can more easily adapt himself to the child's standard of language and

From the Child's Standpoint

understanding than the child can rise to the teacher's standard. H. T. Mark says the hunger of the soul is the philosophy of childhood; if so, the story is the suitable nutrition.

Think the story as you tell it, even if you know it perfectly. The phonograph can reproduce a story but it cannot think it. The events must be imagined vividly as they are narrated; they must be seen and heard again. Children think in pictures and the story-teller must do the same to facilitate the passage of the story from mind to mind.

1. Imaginatively

Act the story too, by suggestion, as you tell it; by suggestion, not by imitation. The movements of animals may be suggested by gestures, to imitate them would spoil the story and suggest a game. The action at the high points should be dramatic but with sufficient self-restraint not to suggest the stage. Dramatic and funny stories especially appeal to children.

2. Dramatically

If you both think and act the story as you tell it, you are likely also to feel it, and this is

highly desirable. Get into the spirit of the story and communicate it. As you do so little effective additions and omissions will occur to you spontaneously. At such a point you have risen above detail and have become a master of the art.

3. Feelingly

Further, by attending to these things you will have forgotten yourself, which is also necessary. The story is the thing, not the teller. To be self-conscious in any way is distracting to both the attention and the interest of the listeners.

4. Self-forgetfully

Finally, if the story have a moral, tell it with indirection; that is, let the moral be implicit, and leave the children themselves to assimilate it. "In vain is the net spread in the sight of any bird." This is more important as the children grow older. The moral that is appended is an anticlimax. The approach of Nathan to David with the story of the man who had one ewe sheep is a model of indirection; likewise the approach of Hamlet to the king with the play within the play. So with us, the moral *in* the story, not

5. With Indirection

of the story, is the thing wherewith we'll catch the conscience of the child.

"To sum it all up, then," says Miss Bryant,[1] "let us say of the method likely to bring success in telling stories, that it includes sympathy, grasp, spontaneity; one must appreciate the story and know it; and then, using the realizing imagination as a constant vivifying force, and dominated by the mood of the story, one must tell it with all one's might, — simply, vitally, joyously."

Other characteristics of the good story-teller mentioned by Haslett[2] are sincerity and purpose, accurate memory, agreeable voice, correct use of the mother tongue, the love of nature, and a keen insight into the child's mental processes. As we hear a story told, we might, for the sake of practice, look for as many of these characteristics in the telling as we can find. At the same time these characteristics help us in endeavoring to improve our own art as story-tellers.

[1] S. C. Bryant, How to Tell Stories to Children, p. 109.
[2] S. B. Haslett, Pedagogical Bible School, p. 245.

One of the habits of educational thinking of our own time is to emphasize the expressive in distinction from the impressive features of teaching. The teacher impresses the child, the child expresses himself; in the process of self-expression, the child requires the guidance of the teacher. This emphasis upon expression as the mode of development is in harmony with the physiological fact that the motor element of the nervous system controls the larger muscles of the body, while the sensory element controls the smaller muscles; also with the psychological fact that opinions as truly follow in the wake of deeds as deeds follow opinions; also with the pragmatic philosophy which holds that action is of primary while ideas are only of secondary importance in our world.

The Reactions of Children on Stories

1. Teaching by Expression

This same habit of educational procedure would require us as story-tellers to secure reactions of some kind from the children upon the stories they have been told. Children like to re-tell stories they have enjoyed, and should

be encouraged to do so in both home and school. It is not to be recommended, however, that children be formally required to tell again those stories whose prime purpose was moral and religious inspiration; in this case the re-telling must take attention away from the content and centre it upon the form of the story, which tends to remove the inspirational effect. In all language and literary study the re-telling has its proper place.

2. Re-telling Stories

Another way of securing reactions upon stories from children is to let them illustrate the story with seat work, such as drawing, pasting illustrative pictures cut from magazines, cutting out figures, clay-modelling, etc. In all these ways the children get the story into their muscles. As Froebel says, "Therefore, with boys of this age, the hearing of stories should always be connected with some activity for the production of some external work on their part."[1] Froebel was a master of children himself and we should attend carefully to this injunction from him.

3. Illustrating

[1] *Op. cit.*, p. 309.

Still another way of securing reactions upon stories from children is to let them act out the story, involving the dramatic feature. The art of dramatizing stories is receiving increasing attention in our day. It is a wonderfully educative procedure. Why?

4. The Dramatization of Stories

To begin with, children are naturally imitators, mimics, and actors. The dramatic tendency is strong in them. They like to impersonate people and even lower animals. This tendency is reënforced by whatever they may have seen on the stage or at the moving picture shows. Acting out the story is a new way of self-expression to children. At times they should be allowed themselves freely to throw the story material into dramatic form, thus stimulating interest and ability in the composition of dialogue.

There is likewise an emotional value in playing a part through the widening of sympathy that comes from putting oneself in another's place.

Some intellectual values are likewise present in the dramatizing process, such as vividness

of the story material gained by representation, fixation of the material in memory, and the cultivation of the imagination. Certain subjects, like history, especially profit by the use of the dramatic art, and the more so if costuming suitable to the period is utilized.

In addition it interests the parents to have their children appear in school plays, especially if requisition is made on the home for costumes. On the whole, whether we go into the dramatizing of stories very simply or elaborately, it is a school art we cannot afford entirely to neglect in our story work.

The Place of the Story in Education

The story has a proper place in all subjects through all grades of education, from kindergarten to professional graduate school; an incidental place, perhaps, but none the less influential for being so. It is probably better to use a story in any subject when the occasion calls for it than to formalize the story-telling by using it only at a scheduled hour. The subjects that lend themselves particularly to story-telling are nature-study,

literature, history, and morals. It were well if a given school system assigned certain stories to certain grades, to secure proper adaptation of the stories to the experience of the children, to prevent undue repetition, and to acquaint the succeeding teacher with the story material the children have already had. Miss Tobey's suggestions on this point are included at the end of this chapter.

Parting Suggestions

For those who would become adept story-tellers, as all fathers, mothers, and teachers should do, a few parting suggestions may be ventured. The first is to read and assimilate the racial stories, to do which is to give ourselves the understanding and appreciation of the primitive mind which the child represents.

1. Read the Racial Stories

Another is to study the principles of story-telling as students have abstracted them from the best practice of the ages. To assist readers in finding stories to tell as well as studies in how to tell them, a list of references is appended to this chapter.

2. Study the Principles of Story-telling

Still another suggestion is to practise interminably and practise intelligently. As you practise study the qualities of the story that make it go as well as those that cause it to lag. Criticise your own work, and seek to improve upon it. In a public address Kate Douglas Wiggin, called "the owner of the golden key to childhood" by Hamilton Wright Mabie, said: "If one has ever told stories to children, one realizes that the main thing is to keep them from wriggling; for once they commence, all inspiration vanishes. When you have told a story that does this, you have done your Homeric best."

3. Practice

Finally the warning suggested by the discussion of fact and fancy in stories at the outset may here be repeated, viz. tell as little as possible that children must later unlearn. In case of doubt it is better to err on the side of calling fact fancy than of calling fancy fact. The danger in the process of unlearning is that it may overreach itself and call the verities into equal question.

4. Tell little to be Unlearned

One real problem of the teacher is how to keep young though growing old. There is an attractiveness about growing old and going on, if it can be done in the right way, as with Browning's Rabbi Ben Ezra. There is also an attractiveness about remaining young and enjoying with Wordsworth the children that "sport upon the shore." But how to do both at the same time? The story is the answer, for it is both as young as the child and as old as the race. The story will develop the children and at the same time preserve the story-teller.

Youth and Age

The place of the story in the family circle is akin to that of music. In the now out-of-print and sole novel of Sidney Lanier, the musical poet of America after Poe, he wrote concerning a home:[1] "Given the raw materials, to wit, wife, children, a friend or two, and a house,—two other things are necessary. These are a good fire and good music. And inasmuch as we can do without the fire for half the year, I may say that music

Lanier, on Music in the Home

[1] Quoted in Painter, Poets of the South, p. 87, N. Y., 1903.

is the one essential. After the evening spent around the piano, or the flute, or the violin, how warm and how chastened is the kiss with which the family all say good night! Ah, the music has taken all the day cares and thrown them into its terrible alembic and boiled them and rocked them and cooled them, till they are crystallized into one care, which is a most sweet and rare desirable sorrow — the yearning for God." For those who have tried it, the story has the same cleansing effect.

A contemporary writer, McLandburgh Wilson, has the following lines on "The Rarest Time":

Love will often come again,
  Though the first be best;
Second childhood comes to men,
  Though 'tis robbed of zest.
Opportunity comes back,
  Only changing guise;
Through the centuries return
  Comets in the skies.
History repeats itself,
  Rings again its chime;
But the fairies only come
  Once upon a time.

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The Three Billy Goats Gruff.
The Old Woman and Her Pig.
The Three Bears.
The Pancake.
The Gingerbread Boy.
The House That Jack Built.
Chicken Little.
The Pig Brother.
The Little Red Hen That Found the Grain of Wheat.
The Ant and the Grasshopper.
The Dog and His Shadow.
The Fox and the Little Red Hen.
Town Mouse and City Mouse.
The Town Musicians.
The Hill and the Little Boy.
Five Peas in a Pod.
The Lion and the Mouse.
Billy Boy.
The Cat Learns to Dance.
Belling the Cat.
Little Red Riding Hood.
The Straw, the Coal, and the Bean.
The Little Plant.
The Three Little Pigs.
Titty Mouse and Tatty Mouse.

FIRST-GRADE STORIES

Little Mouse Pie.
Poplar Tree.
The Anxious Leaf.
The Little Jackal and the Alligator.
The Crane Express.
The Elves and the Shoemaker.
The Boy Who Cried "Wolf, Wolf."
Epaminondas and His Auntie.
The Foolish Weathervane.

The Goose and the Golden Eggs.
Little Half-Chick.
The Fox and the Grapes.
How the Chipmunk Got His Stripes.
The Discontented Pine Tree.
Briar Rose.
One Good Trick.
The Blind Man and the Lame Man.
The Lion and the Jackals.
Johnny Cake.
The Sleeping Apple.
The Thrifty Squirrel.
Lambikin.
The Hare and the Tortoise.
Jack and the Beanstalk.
Timothy's Shoes.
The Brownies.
Little Black Sambo.

SECOND-GRADE STORIES

Why the Evergreen Trees Keep Their Leaves.
The Wind and the Sun.
Goldenrod and the Aster.
Little Pink Rose.
Dog in the Manger.
Jack the Giant-Killer.
The Fox in the Well.
One Eye, Two Eyes, and Three Eyes.
Puss-in-Boots.
Sleeping Beauty.
Snow-White and Rose-Red.
How the Robin Got His Red Breast.
Midas and the Golden Touch.
North Wind.
Why the Sea Is Salt.
The Little Jackal and the Camel.
The Little Jackal and the Lion.

Kinkach Martinko.
King Solomon and the Ants.
The Crow and the Cheese.
The Honest Woodman.
Hop-o'-my-Thumb.
Cinderella.
Peter Rabbit.
How Brother Rabbit Fooled the Whale and the Elephant.
How Mrs. White Hen Helped Rose.

THIRD-GRADE STORIES

The Legend of Arbutus.
Beauty and the Beast.
Bluebeard.
The Engine Story.
The Shut-up Posy.
Rumpel-stilts-kin.
The Brave Tin Soldier.
The Feast of the Lanterns.
The Golden Bird and the Good Hare.
The Frog Prince.
The Red-Headed Woodpecker.
Hansel and Gretel.
Match Girl.
Toads and Diamonds.
Bruce and the Spider.
Nuremberg Stove.
The Star Dollars.
Hans, Who Made the Princess Laugh.
The White Cat.
Narcissus.
The Discontented Mill Window.
The Lost Child.
Sinbad, the Sailor.
Apple-Seed John.
The Enchanted Horse.
The Pot of Gold.

The Enchanted Wine Jug, or Why the Cat and Dog Are Enemies.
The Red Shoes.
The Six Swans.
Ugly Duckling.
Classic Myths — Clytie, Etc.

FOURTH-GRADE STORIES

The Last Lesson.
The Knights of the Silver Shield.
Why the Chimes Rang (Alden).
William Tell.
King Alfred and the Beggar.
King Alfred and the Cakes.
Jason and the Golden Fleece.
Adventures of Ulysses.
Aladdin and His Lamp.
Robin Hood.
Hercules.
Theseus.
Orpheus and Eurydice.
Iduna's Garden.
Iduna's Fall.
Iduna's Return.
The Beautiful Apples.
Cadmus and the Dragon's Teeth.
Expedition of the Argonauts.
How Thor Found His Hammer, and other Norse tales.
Siegfried's Adventures.
Prometheus.
Balder and the Mistletoe.
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Rip Van Winkle.
The Pied Piper.
Perseus.
Achilles.

Darius.
Pandora's Box.
The Nightingale.
How the Camel Got His Hump.
The Elephant Child.
Pan and Apollo.
Damon and Pythias.
Cornelia and Her Jewels.
The Burning of the Rice Fields.
King of the Golden River.

Questions on the Art of Story-Telling

1. Why is civilization hard on story-telling?
2. What are some signs of a revival of interest in story-telling?
3. Give six illustrations of racial stories.
4. Define the story and show the meaning of the definition.
5. What are the four elements in the form of each story?
6. What is the main purpose of story-telling? Name some other aims. Compare Lincoln's use of the story.
7. Give three reasons why the story is important.
8. Name as many characteristics of the good story as you can.
9. Describe eight ways in which a story should be told.
10. Why is it important that children should re-act on stories they have heard?
11. Describe several ways in which children may re-act on stories.
12. Discuss fully the educational value of dramatizing stories.
13. What is the place of the story in education?
14. How may one become a better story-teller?
15. Why does story-telling help to keep the soul young?
16. Which of the books in the reference lists have you read?

Suggestions for Further Study

1. Compare the form of the story with that of the drama.
2. Compare the story with the essay as to concreteness of presentation. Illustrate.

3. Work out the four elements in the form of the story as they appear in three stories you tell your class.

4. What results do you achieve by story-telling?

5. What is some of the folk-lore of your community?

6. Why are children so interested in stories?

7. In what consists your own weakness as a story-teller?

8. Why is it better to tell than to read a story?

9. What have you noticed as to the repetition by children of stories they have heard?

10. Is a story-teller born or made?

11. Can you illustrate from your own case having to unlearn things once told you?

12. Distinguish legend, myth, and fairy story.

13. Why does the advance of science not tend to displace works of imagination?

14. What are the effects on children of reading too many stories? Of reading stories too advanced for them? Of reading only "children's stories"?

15. Was Aristotle right in saying "poetry is truer than history"? Why?

16. Characterize the method of story-telling of some person you know.

CHAPTER II

THE ART OF QUESTIONING[1]

Plato on Questioning

In his most important dialogue and the most important ancient document on education, the Republic, Plato wrote: "Then you will enact that they [the rulers] shall have such an education as will enable them to attain the greatest skill in asking and answering questions." [2] Plato appreciated the value of such skill through having been for eight years a pupil of the incomparable questioner, Socrates. In fact, the questions of Socrates gave rise to the dialectic philosophy of Plato and to the dialogue form into which it was cast, whence in turn came the mediæval disputations and the modern debates, dialogues, and other forms of "the Socratic Art." But teachers have not

[1] This chapter is rewritten from three short papers that appeared in *The Pilgrim Teacher*, Boston, March, April, and May, 1903.

[2] Republic (Jowett Tr.), 534 D.

yet attained that skill in questioning which Plato desired. To him questioning was the preferred method of teaching the most advanced subject, — dialectic, or the knowledge of the ultimate ideas. As it was by questioning that Socrates developed the concept, so it was by questioning that Plato reached the ideas, which to him were the only absolute realities.

Outline of this Chapter

The phases of this art in teaching that will engage us successively are: the importance of questioning, the purposes of questioning, the kinds of questions that teachers may ask, the manner of questioning, the form of the question, the content of the question, the questioner himself, the answer, and certain illustrations of great questioners, including Socrates and Jesus. This is a large outlay, but perhaps no larger than the relative importance of the subject itself warrants.

If we inquire whether the exalted position assigned questioning in teaching by Plato in the quotation above and the history of education be justified, we are left in no doubt in

the light of reason. Questioning is one of the supreme methods by which a maturer mind can assist a learner's growing mentality. It best enables teacher and pupil to work together, standing in contrast both with the lecture method, which tends to make pupils passive, and with the let-alone method, which leaves them unguided. The question both guides and stirs to action.

The Importance of Questioning

A Main Mode of Teaching

We begin to realize how important it is to question well in teaching when we estimate what proportion of our classroom allotment of time is devoted to the back-and-forth asking and answering between teacher and pupils. In all grades of work below university classes and their equivalent, educational custom has assigned to the question the burden of teaching. A real question is a sign of a mind alive, and the question-mark is the best symbol of the reaction of man's intelligence on his world.

The Time it Takes

To question well is to secure attention, through the very fact of requiring a response.

The rising inflection of the voice catches the attention through suggesting that a reply is expected. The question interests the mind through assigning it something to do, and, if well asked, it also appeals to the mind to show its power. To an interesting question one likes to attend; even to an uninteresting question that tests our powers we prefer to attend, lest our answer or the want of it reveal us to be weaker than we are. Thus good questions will win for teachers both the involuntary and the voluntary attention.

An Aid in Securing Attention

Further, good questioning secures better class management. The class engaged with questions being asked by an interested teacher has no occasion for disorder. Managing a class is never an end in itself, but only a means for doing the business in hand; if the problem of managing sinks out of sight through the engrossing mental activity of teacher and pupil alike, so much the better. Good questioning is not the whole secret of managing, but it is a part of it.

and Class Management

Lastly, on the importance of questioning, it is enough to say that good questioning is good teaching. A poor questioner cannot be a good teacher, though he may be a good lecturer, and a good questioner cannot fail altogether as a teacher. For teaching is the art of stimulating mental growth, and nothing does this better than the right kind of questioning. Despite the fact that questioning as a rule is so poorly done, it is encouraging to us that no one of the teacher's arts is so easily improvable by thought and effort as this of questioning, and improvement is nowhere more rewarded in teaching than here. Questioning is that one of the arts in teaching most easily mechanized, though it cannot be completely mechanized. And for all it is so important an art and occupies so large a place in teaching, it is by no means all there is to teaching.

To Question Well is to Teach Well

What are the main purposes in questioning? Or, what are the main uses to which questions may be put? The answer is important not only for its own sake, but for the sake of

determining presently the different kinds of questions. There are four main purposes for which teachers use questions. The first purpose is to secure and to keep contact with the minds of the class. The second, the largest and most complex purpose of the four, is to set forward the attainment of the class in a given field. The third purpose is to review the material covered. And the fourth purpose is to examine the class, with a view to determining not merely what the pupils do not know, but also what they do know, what their needs are, and how efficient the instruction has been.

The General Purposes of Questioning

The second purpose requires a few further words of exposition. In setting forward the attainment of the class in a given field, several things are involved. These are: doing justice to the pupil, by both advancing his knowledge and developing his initiative, and doing justice to the subject. In doing justice to the subject the method of questioning has one of its main uses. A new subject may be presented not by lecture nor by reliance on a text, but by a series

of closely connected questions bringing out the main features of the new material. It is rather a difficult form of questioning to use, though, when well done, the results are realistic to the class. Ziller and other German Herbartians have particularly commended it.

The further details involved in each of these four main purposes or uses of questioning will appear in our discussion of the corresponding kinds of question now to follow.

The Kinds of Question

We may distinguish the kinds of question, according to the four main purposes they serve, by the aid of the following names: first, the auxiliary; second, the searching or heuristic; third, the review; and fourth, the examinational. Let us briefly describe the character and the more detailed purposes of each of these kinds of question.

Character of the Auxiliary Question

The very name of the auxiliary question indicates its subsidiary character. Its main purpose is to effect and to keep adjustment between the teacher and the class. It is also distinguished from the other kinds of question in that it does not

put the pupil on his mettle; it calls for only a descriptive answer from him, which in no way reflects credit or discredit upon his mental attainment or ability.

The auxiliary question would be illustrated by the preliminary inquiries of the class by the teacher in order to learn what their previous experience or training had been that would suggest the "point of contact," as Patterson Dubois calls it, between pupil and lesson. Also, such questions as, "Is there any point in the lesson not clear to any member of the class?" "What is your difficulty with this point?" "Is what I have just explained clear to everybody?" "Will anybody ask me a question on any matter in the lesson?" "Why did you make the particular mistake you did?" etc. Naturally such auxiliary questions may fall at the beginning, in the course of, or at the conclusion of, the recitation. In lecturing to older classes particularly it is important semi-occasionally to stop and ask such questions as, "What point have I just been making?" "Is there any

Illustrations

question?" in order to give passive listeners an active rôle, in order to give warning that lecturing does not invite inattention, and also to preclude talking "over the heads" of the students.

Character of the Searching or Heuristic Question

As its name indicates, this question goes on a quest; "without a quest, no conquest." It would discover new truth, or new apprehension of old truth, or the bearing of truth on life, or develop unsuspected mental functions. It would also with advanced classes lead to mental invention, in the formulation of hypotheses, in the expression of judgments, in the processes of reasoning. As this is probably the most important of the four types of question we must pay especial attention to its purposes.

To be specific, we may distinguish five purposes of the heuristic question, viz. (1) to discover what the pupil has learned about the lesson, and, in case of conceit of knowledge or of the effort to seem to possess what he does not, to convince him publicly, in Socratic fashion, of ignorance. It must be evident to

all, however, that this painful process is animated by the motive of sympathy and well-wishing on the part of the teacher, never by the desire to entrap or win a point.

(2) To discover how the pupil knows, whether verbally or really, whether vaguely or definitely, whether theoretically or practically, whether honestly or dishonestly, etc. In case the manner of knowledge is unsatisfactory, the teacher must show by one question following another the more acceptable way.

(3) To improve the character of knowledge, by fixing it through answers and repetition, by correcting it as the answers reveal the need of correction, by emphasizing essentials and neglecting non-essentials. The members of the class should never be left in doubt as to what the correct answer is, or, in case of a mooted point, as to what the teacher personally thinks.

(4) To train expression in answering. In a sense, a secondary sense, it is true that every lesson is an English lesson; in any classroom slangy or ungrammatical answers and mispronunciations should not go uncorrected. And

the way to correct them is to have the pupil repeat the corrected form. This should be done by way of parenthesis in other classrooms than the English. It always requires tact to make such corrections, and, in the case of older pupils, it had better be done in private.

In this connection it should be remarked that clarity of expression is dependent not simply upon vocabulary, but also upon clarity of thinking. To demand simple and clear answers is therefore to encourage that simplicity and clearness of thinking which, as Descartes said, the truth demands.

(5) To develop initiative, self-activity, the sense of power, and mental grasp of life. The heuristic question goes beyond the known facts possessed by the pupil into the region of his reaction upon them in terms of judgment and reason. To answer a question involving memory requires indeed mental activity, but to answer a question involving judgment requires self-activity, and the answer is self-expression, revealing mental quality. A fact remembered

may be the same for all, a fact judged may differ in the case of each pupil. By means of the questions that pursue him into the inmost recesses of his mentality, that throw the mind back upon itself in reflection, the true teacher makes the pupil aware of his unsuspected mental powers, gives him the joy of self-discovery, and becomes himself worthy to be called a follower of his heuristic master, Socrates. The heuristic question in simple form can be used with the lower grades, but its finest fruits appear only with the adolescent and mature mind.

For illustrations of the heuristic question, the lists of questions at the end of this and the other chapters may be used. The first list in each case refers to the text, and the second list, more advanced in character, refers to material beyond the text. Some heuristic questions on Lincoln's Gettysburg Oration, with which every teacher is familiar, would be as follows: Illustrations

At the time Lincoln spoke, how old was the American Republic?

To what proposition was it dedicated at birth?

Of what did he say the Civil War was a test?

What does he say was the occasion of the gathering to which he spoke?

Why could they not consecrate that ground?

What then should they do?

For what purpose should they dedicate themselves?

Heuristic questions of a more advanced character, going beyond the letter of the Oration, would be as follows:

Upon what occasion was this Oration delivered?

Who had just spoken?

What in the address itself shows Lincoln was not aware he was speaking immortal words?

What is the metaphor in the first sentence?

In what sense is it true that "all men are created equal"?

Try to arrange the Oration as blank verse (see *Literary Digest*, Feb. 26, 1916).

How would you characterize the style of this Oration?

Whence did Lincoln acquire such style?

What are some antecedents of the phrase: "Government of the people, by the people, for the people"?

Memorize the Oration and try to deliver it as you fancy Lincoln did.

The Review Question

The third kind of question is the one used in review. The character of the questions asked in review should depend on the purposes of the review.

Secondary, but real, purposes of the review are to memorize by repetition and to drill. This type of review is necessary, because we do not really know a thing until we have learned it, partially forgotten it, and learned it again. Questions securing this result will be short, sharp, quick. Examples would be, in grade work, "Who discovered America?" "When?" "Where did he first land?" "For what was he really looking?" "To what nationality did he belong?" "Whence did he sail?" "Why from there?" etc. The lower grades will rely mainly on such questions.

Secondary Purposes of Review

But the primary purposes of the review are to give perspective and organization to knowledge. Perspective in a subject involves the larger view that comes with the review, and organization of knowledge involves logical relationships between essentials and details. In historical subjects a great aid to perspective is continuity and in all subjects the great aid to organization of knowledge is some unifying principle. Thus,

Primary Purposes of the Review

in reviewing the geography of a continent, the central question might be: "What is the influence on the people of this continent of the following features, viz. climate, mountains, rivers, oceans, plains, forests, fertility of the soil, etc.?" Likewise, in reviewing the literature of a given period of a certain people, the central question would be, "How is the life of the people reflected in the following types of their literature, viz. ballad, tragedy, comedy, lyrics, epics, satire, fiction, etc.?" Likewise in reviewing the history of a given epoch, the perspective and organization of knowledge might be secured by some such central question as, "How was the development of the individual affected in this period by the art of agriculture, factories, commerce, education, form of government, religion, etc.?" This type of unifying review questions meets the first purpose of a review. The examples of questions just given would belong with the upper grades and the secondary schools.

Illustrations

Such review questions as these may be answered orally, or in the form of a topical outline,

or essay, or drama, or the teacher may answer the question in the form of an illustrated story or talk.

In making a review, new material should not be included, but a second and larger view should be secured. It is also proper to make applications. A review is ordinarily desirable for both younger and older pupils, especially in the subjects involving many facts and details. Vitalized teachers dealing with mature students may find that a review is unnecessary, detracting from the freshness and enjoyment of the first view of the field. In such cases it is important that the examinational question serve the purpose of unifying the subject.

The Examinational Question

The examinational question, as its name implies, is one that seeks to test past instruction and present ability. It comes at the end of a course, and its results often serve as a basis for promotion. It may be either oral or written. Too much of our teaching is really examining results of pupils' work rather than working out results with pupils. And too much of our final exam-

ination tests the mental function of memory rather than that of judgment. The examinational question serves two indispensable educative purposes, — one, the organization of knowledge, and, the other, the application of knowledge. Pupils should know in advance that the examination will test their ability to see the material whole, to institute comparisons, and to make application of principles to new situations. To get the best results from an examination, pupils should know in advance it is coming. It is not wise to use the examination as a threat to secure better daily work, which serves to increase the pupils' distaste for examination. Teachers should do what they can to decrease any nervous strain due to examinations. To omit them altogether, on the basis of a high daily average or otherwise, is not to be commended, because in no other way can pupils be brought so well to the organic view of their subject and of knowledge. An examination properly given is not "a scarecrow in the garden of wisdom," but an opportunity for intellectual self-expression, not a

necessary evil but an important good, and as such should be anticipated with the joy of the strong man in the race.

In illustration of these points of view I will append a copy of one of my own examinations given to college men which evoked no protest and which was based on a text known to some of my readers, my "Psychological Principles of Education." Illustrations

SECOND SEMESTER, 1908–1909

EDUCATION 4

1. In view of the results of this course, in what sense, if any, is educating a science?

2. What has practical psychology led you to plan to do in your work?

3. State just what psychological effects upon your pupils you expect your subject to have.

4. In what ways does the mind get knowledge?

5. State the principles in educating the feelings and apply them to three selected instances.

6. Name as many of the instincts of children as you can and show the way to treat each.

7. Discuss three hindrances to attention, showing how they may be removed.

8. Describe the development and training of the religious nature in youth.

DARTMOUTH COLLEGE.

Having now seen the kinds of question that may be asked, we turn next to the manner of their asking. The heart of the matter here is that questions should be asked by the teacher with great sympathy for the pupil, with confidence in his ability to answer, with expectation that he will answer, with surprise when he does not answer, with interest in his answer, and with particular attention to his answer. By such a manner in questioning the pupil is to be encouraged to do his best; his spontaneity is not to be frozen by the evident coldness of an inquisitor, by the haughty demeanor that seeks in questioning the assurance of a suspicion that the answerer knows little of what he is saying.

The Manner of Questioning

With Sympathy

A further matter of simple detail is the advisability of stating your question to the class as a whole and then naming the pupil who is to answer. The advantage of this order is that all the pupils think the answer before any one is called upon to give it. The disadvantage of naming the pupil

The Question before the Pupil

before stating the question is that the other pupils are then less likely to give attention, since after all the question is not addressed to them.

Further it is desirable that pupils be called upon in no regular predictable order, thus keeping the whole class, even those who have already recited, on the *qui vive* all the time. To call upon pupils alphabetically, or according to their seating, is to extend an implicit invitation to inattention to certain members of the class.

No Predictable Order of Pupils

Again, questions should not be repeated, without good reason. This means, of course, they should be well asked in the first instance. To repeat a question on request from an inattentive pupil is to reward inattention. Likewise, teachers should not repeat the correct answers of the reciting pupil, for the attention of the class should be given to the answers as well as to the questions; besides much time is thereby saved; furthermore, it is irritating to good pupils to have their answers re-

But little Repetition

peated, slightly modified, as though corrected, by the teacher.

With Deliberation

It is also well to ask questions deliberately, thinking of the question and its correct answer yourself, and allowing a slight pause after putting it before calling for the answer. Such a sedate process invites thinking; it also does not throw a pupil off his mental balance through the surprise of hearing his name called; and it lends dignity to the procedure. Of course, in review and drill questions considerable speed may be attained.

General and Specific Questions

We are sometimes puzzled to handle aright a general, advanced question we want to ask. Such questions have a place in the classroom as suggesting more beyond, as indicating that the teacher teaches the truth and not the text. Such general questions should be asked of the class as a whole, in contrast with specific questions on the lesson assigned, which should always be asked of individuals. The reasons for this procedure will appear on reflection. Being asked of the whole class, a wrong answer from

a volunteer is no discredit, while the correct answer is a distinct credit. To ask such a difficult question, to which you have not the right to expect the answer, of an individual takes an unfair advantage. On the other hand, to ask specific questions, to which each one should be able to respond, of the class as a whole is to lower the tone of the teaching, is to let off the slow ones too easily, is to encourage the bright ones overmuch. Questions then to which you have the right to expect an answer should be asked of individuals; those to which you have no such right should be addressed to the whole class.

Lest these and other suggestions to follow be taken too rigidly, let me add that the manner of our questioning, however good, should be varied from time to time, that a virtue become not wearisome through monotony. Little surprises to the class, due to the teacher's versatility and ingenuity, are very grateful, and they may appear in the teacher's dress, speech, demeanor, or manner of teaching.

Variety

As form apart from content is an abstraction, some of the formal characteristics of questions now to be considered may trespass upon the succeeding phase of our discussion which deals with the content of questions. This is especially true of the first characteristic of the form of questions, which is clearness.

The Form of the Question

Questions should be clear. This is perhaps the most obvious of all demands upon the art of right questioning. It means that teachers think out their main questions before asking them, that they be acquainted with the apperceptive powers of their pupils, that they reject unusual words needing definition in framing their questions, and that they eschew all intention to befuddle and confuse the minds of their students. Even then some questions will not be clear to some pupils, but for this the teacher is not alone responsible.

Clearness

Closely involved in clearness is brevity. Questions should be brief. All parenthetical explanations and subordinate clauses may well

be omitted, as well as repeated efforts to state the question. The fewer the words that call for what you want to know, the better. In this connection it may be remarked that two distinct questions had better not be asked in one, as tending to unclear thinking. Both clearness and brevity are more easily secured if the teacher thinks clearly himself and knows what he wants to ask.

Brevity

Further, questions should be couched in as good English as the teacher can command. The same is true not only of questions but of all one's teaching. The temptation is strong upon some teachers to make themselves intelligible by resorting to the familiar slang of the day, whereas for their pupils' sake they should draw only from the well of English undefiled. Let your questions be your own questions, not drawn from any printed page, unless you are as fully their master as though you had framed them yourself. In this way the question is the outgo of the teacher as truly as it calls for the outgo of the pupil.

Good English

For the most part, avoid questions calling only for a "yes" or "no" answer. Such answers as a rule do not demand enough thinking, the chances are too great in favor of a guess, and no training is secured in connected discourse. The permissible questions with these short affirmative or negative answers are such as really require thinking before the answer is given, and so lead the way to the question "Why?"

The "Yes" and "No" Answer

And lastly, the form of the question should not suggest the answer. The question should stand upright and not lean toward either the correct or the incorrect answer. It is very easy for the teacher to suggest by facial expression as well as by the form of the question whether the pupil is on the right tack or not. In the direct examination of a witness no lawyer is permitted by the rules of evidence to ask a "leading" question, that is, one that suggests the answer wanted. Only in the cross-examination of witnesses is this form of question permissible. But the motives of a cross-examination have no place

No "Leading Question"

in the regular classroom work; it may have a place in the principal's office in a case of discipline. In the heuristic question we should avoid leading the pupil to the correct answer as we should misleading him to the wrong answer. Likewise the "catch" question is to be eschewed, unless it is announced as such, when it loses its edge; otherwise the pupil caught by it is sure to feel himself not fairly treated. The teacher dealing with a pupil answering out of the fulness of his ignorance as though he knew can silence him and convince him of his ignorance by straight questioning, without resorting to the game of "catch" or misleading questions, and the effect will be better. It is never safe to set a trap for a pupil lest he ensnare you before the class by exposing it. You are not to win a victory over him, but you and he are to win a joint victory over ignorance.

The Content of the Question

In one sense a question has no content; it is a form of speech that calls for a content. Thus really the answer is the content of the question. So in discussing the content of the question we are

discussing its characteristics as best adapted to elicit good answering.

First of all, a question should be stimulating, interesting, suggestive. It should awaken a train of associated ideas, and prove thus to be an incentive to intelligent response. This is more likely to be the case with the bright pupils than with the dull ones and so it is a peculiar victory to be able to ask questions that stimulate dull pupils.

Stimulating

Second, questions should be definite; that is, they should call for a specific answer, they should not be vague, and not cover too much ground. A question is like an arrow aimed at a target; there is only one way to hit the bull's-eye, there are a thousand ways of missing it. The pupil who has carefully prepared the work assigned rejoices in a definite question, finding a vague one unfair to his preparation, but a pupil who has only a smattering acquaintance with the lesson finds an indefinite question preferable.

Definite

Third, questions should be essential in character; that is, they should call out the main

points in the lesson, omitting the non-essentials. Any text-book is like a picture, with foreground and background, the latter existing for the sake of the former. The question should put into the foreground the essentials of the assignment, leaving the non-essentials in the background. To ask questions in this way means analysis of the lesson and a judgment of values upon the part of the teacher, and it also encourages pupils to stress the main points and to estimate which they are. Furthermore, the æsthetic sense of proportion is pleased at such nice adjustment of question and lesson.

Essential

Most teachers ask too many questions. It not infrequently happens that a single class exercise includes over a hundred questions. Such comminuted bits of knowledge destroy the perspective between essential and non-essential elements in a lesson, besides training the pupil in disconnected thinking and discourse. Ask fewer questions and broaden their scope.

Fourth, questions should be logical; that is, an inherent connection should exist between successive questions, just as there is an inherent

connection in a well-composed text. The questions thus should grow out of each other, and so the whole subject should gradually be unfolded. Frequently the answer of a pupil will be the best clew to the next question. In any case continuity in the presentation should appear. Toward the end of the lesson unifying questions should be asked that gather the essence of the whole into one or two answers, leading to an intellectual vision of the whole truth in question, and making applications of truth to life easy.

Logical

Fifth, questions should not simply test the memory but also exercise the judgment. It is easy to ask questions whose answers have been learned from a text; it is not easy to ask questions that involve thinking, the application of what has been learned to a new situation. Yet it is this type of question that distinguishes the rote learner and teacher from the flexible type. Equipment for success in life is not only memory, but also, and especially, judgment. Memory makes good followers, but judgment is essential for leadership.

Thought-provoking

Sixth, questions should be suited to the capacity of the pupil questioned. This means that teachers should know the capacities of their pupils, and not have so many pupils in one room that they cannot make an individual study of them. Gradation supposedly puts pupils of practically the same capacity together; but even so, variations appear in the same classroom. Each pupil should be asked questions that take him where he is and lead him on. To ask questions beyond capacity is discouraging, to ask questions below capacity is belittling, but to ask questions just within capacity is developing.

Suited to Individual Capacity

The teacher as questioner, — what ought his characteristics to be? A few of these have already been intimated in the preceding discussion.

The Questioner

First of all, the questioner must be industrious enough to prepare some at least of his questions in advance, even to the point of writing down a few main ones. Not all questions should have been first prepared, nor should one be rigidly bound by his own

Prepare in Advance

preparation, but the fact of having prepared will itself improve the quality of his spontaneous questions. The very best question will probably not have been thought of in advance, but will be called out by the needs of the occasion. The teacher should attend carefully to the pupil's answer, which often is the clew to the best question to ask next.

Secondly, in order to question well, the teacher must cultivate an analytic habit of mind. It is a good plan to annotate the margins of one's own book with the essential thoughts in each paragraph, unless the author of the text has himself already done so. To analyze a lesson into its essential points is the first step toward formulating the best questions on it.

Analytic

Thirdly, the teacher should be practical-minded enough to ask questions that make a difference; that is, he should teach from life for life. There is but little place in the schoolroom for the merely academic question, that is, for the question whose answer changes no act, feeling, or thought. The time

Practical

has gone by when the schoolmaster was the sharpener of wits on questions admitting of dubious, difficult answers, or none at all. The early Middle Age teachers of great renown were fond of such unpractical wit-sharpeners as, How many furrows has a farmer ploughed when he has turned three times at each side of his field? or, Find three odd whole numbers whose sum equals three hundred? or, Can angels go from place to place without traversing the intervening space? To the first of these three the Venerable Bede and the great Alcuin gave different answers. It is true that such puzzles interest the mind; they had more place in a time when the human mind was bent, not on exploration and discovery, but on whetting its powers, — "*ad acuendos juvenes*," said Alcuin.

Fourthly, the questioner should be capable of eliciting the best from his answer; this means he must be encouraging, attentive, interested, sympathetic, confidence-inspiring. To be so is to call forth the best efforts of the respondent. The pupil's answer should be treated as important, — it is to him.

Elicit the Best

No doubt of his ability to answer should be suggested. His sense of power in getting and expressing his ideas is cultivated through your appreciative recognition of his efforts. Never laugh *at* a pupil, though you should often laugh *with* him. Never be contemptuous of a pupil's ignorance or half-formed opinions, unless you would repel him. Treat each pupil under your questioning, not as a target under fire, but as a plant under cultivation; you do not so much hear him recite as see him grow.

Be Ready to Answer

Fifthly, be as ready to answer questions as to ask them. There is a certain inherent artificiality in schoolroom questioning; on the street, the man who questions wants to find out something he does not know, which his informant tells him; but in the schoolroom the teacher who is supposed to know already does the questioning. It would be less artificial if the pupils did the questioning and the teacher the answering. The highest compliment to a teacher as questioner is that his pupils ask him questions, not questions to kill time, but because they want to know. The

dangers in using this method exclusively are that some pupils are likely to be neglected and the subject is presented in a haphazard fashion. But every pupil should feel free to ask the teacher a question that concerns him. This means of course that the teacher will at times have to confess ignorance, which will in the end do his soul good; also that he must "profess" nothing which he does not possess. For the teacher to take the attitude that he is there to question, not to be questioned, is a travesty on the true teaching which awakes, not narcotizes, intelligence. Growing minds are instinctively curious, if we give them half a chance to be so. Pupils should not only feel free to ask a question when they have one, they should also at times be allowed to set questions for each other, thus taking the teacher's point of view, and coming to study from another angle and interest. In giving advice to the teacher of rhetoric, Quintilian [1] says: "Let him reply readily to those who put questions to him, and question of his own accord those who do."

[1] Institutes of Oratory, Bk. II, Chap. II.

Rousseau writes:

> Be content, then, with presenting to him suitable objects; and then, when you see his curiosity sufficiently excited, address to him some laconic question which will put him in the way of resolving it. . . . If he asks you questions, reply just enough to stimulate his curiosity, but not enough to satisfy it. Above all, when you see that, instead of asking questions for instruction, he undertakes to beat the bush and to annoy you with silly questions, stop on the instant, for you may then be sure that he no longer cares for the thing itself, but merely to subject you to his interrogations.[1]

The answers given to pupils by the teacher when they are matters of opinion and not matters of fact should be undogmatic in character.

Sixthly, the questioner should be self-critical. When he feels he has failed, he must not be downcast, but resolutely and manfully set to work to discover the reason of the failure, that he may remove it. He must learn to question by questioning and also by reflection upon his questioning. The time to examine ourselves is as early after the failure as possible, while its details are in mind. It is a rare friend who will tell us frankly our faults,

Self-critical

[1] Rousseau, Émile, pp. 139, 145 (Payne Tr.).

but we can learn from ourselves, if vanity do not blind us, and also from those who do not like us, if narrow-mindedness prejudice us not. If the secret of your failure is that a member of your class does not like you, be magnanimous enough to have a private conference with him, and end by requesting a favor of him that implies responsibility.

Lastly, let us study the literature of this subject. Questioning is the old standard method of teaching; as such it has been studied by educators from Socrates through Abelard till to-day. The literature of the subject is both old and new, and also considerable. If we would improve ourselves in this delicate and fine art, we should draw from many living wells, some of which I have indicated at the conclusion of this chapter.

Study the Literature of this Subject

It is important for teachers to have an ideal of the kind of answer they want. If teachers are satisfied with the "It says" type of answer, or the exact words of the book, then the pupils tend to give that kind of answer. But the character of what an answer

The Answer

should be has been reflected by our discussion of the character of the question.

There are three main desirable characteristics of the answer. The first is, that it be the product of the pupil's best mental reaction upon the question, his own individual reaction, with the outgoing of his personality behind it.

The Pupil's Best

The second is, that, like the question, the answer should be couched in good English. The slang of the street, or incorrect grammar, or a mispronunciation should not be allowed to pass uncorrected in any classroom. The best way is to ask the pupil to try to correct the mistake in form himself. The answer should usually be a complete statement, and may often profitably be the whole story of the lesson. The teacher has triumphed who can bring into his classroom the toleration of a long answer from a pupil.

Good English

The third is, the answer should be correct as far as it goes, for the sake of knowledge. A correct answer need not be repeated by the teacher, though it may be; it may sometimes be written by the teacher on

Correct

the board or by the pupils in their note-books or it may be repeated by the class in chorus.

To secure these three results in the best way, written as well as oral answers will sometimes be necessary. A written answer is not under such immediate control of the teacher as the oral answer. In advance of a written test it is well to instruct pupils as to the characteristics you desire their answers to show. Thus, in addition to the three qualities described above, a written answer should correctly interpret the question asked, should show good arrangement of material, and should include no irrelevant filling. These results can be secured by a judicious and leisurely reaction upon the question and by ordering one's answer in one's own mind before beginning to write.

Oral and Written Answers

In the conduct of the recitation, how shall we handle the well-intentioned incorrect answer? Recognize any good you can find in it and then pass the question to another pupil. It sometimes hurts the

The Incorrect Answer

pride of a good scholar to have a question passed on, but to pass it on nevertheless stimulates his effort in his next answer.

Answers to be Discouraged

Certain types of answer should be distinctly discouraged and rejected, such as the random, careless, hasty, and guessing types, and, of course, in any form in which it may appear, the dishonest type. If it is evident no member of the class knows the correct answer, the pupils may be told where they can find it, or the answer to a difficult question may be given outright. Teachers should not avoid the confession of ignorance by the subterfuge of telling pupils in a vague way: "that would be a good thing to look up." It is important that teachers be sincere and that pupils come to feel the mystery of the world through the inability of the teacher or anybody to answer some questions.

The answer of the pupil as the expression of his life and thought the true teacher especially regards and studies; it is one of the real measures of the degree of our success as teachers.

Not as reflecting any discredit on the pupils, but as revealing weaknesses in our own teaching, let us consider the humorous confusion in the following answers of high school pupils to questions on the New York State Regents' examinations:

Natural Humor in Pupils' Answers

"A vacuum is a large empty space where the Pope lives."

"Pompeii was destroyed by an eruption of saliva."

"Typhoid fever may be prevented by fascination."

"Silas Marner was written by Maxine Eliot."

"Three members of the cat family are Papa Cat, Mamma Cat, and Baby Cat."

"Georgia was founded by people who had been executed."

"Two compound personal pronouns are he-goat and she-devil."

"A mountain pass is a pass given by railroads to their employees so they can spend their vacations in the mountains."

"Dew is caused by the swetting of the earth."

"The nails would get very long if we did not bite them occasionally."

"The stomach forms a part of the Adam's apple."

"Sanitary suggestions for milking: If a cow switches his tail, it may hit a bacteria and knock it into the milk pail."

"Dikes are made of rocks and cement, or, in cases of immediate danger, of bags of dirt, or even the people have huddled together to keep the water from entering Louisiana."

"The approximate annual rainfall of New York is mostly in the spring."

"How a knowledge of Biology aids in pruning a tree: After pruning a tree, clean the dust out of the pores and allow the tree to grow prunes again."

"The hair keeps things from going into the brain."

"Permanent set of teeth consists of eight canines, eight cuspids, two molars, and four cuspidors."

"The cause of indigestion is trying to make a square meal fit a round stomach."

"Insects may be destroyed late at night by pouring Paris Green on them. This is the time when they are at home."

"The alimentary canal is in the northern part of Indiana."

"The most interesting book I read was the Bible. It was about the life of our Lord. It was written by Archbishop McCloskey."

"Sixty gallons make one hedge hog."

Among the things shown by these answers are: imagination, lack of definite knowledge, lack of observation based on experience, confusion of words similar in sound, misleading associations, and reliance too exclusively on oral instruction. Such mistakes are not only amusing, they are, or should be, instructive to teachers.[1]

[1] Cf. "The Mistakes of Professors," School and Society, Vol. I, p. 132.

By way of bringing this long discussion to a conclusion, let me refer to certain great questioners as illustrations. From out the ancient world, let us select Socrates and Jesus, both preëminent questioners.

Great Questioners

Socrates has great fame as a teacher, and deservedly so, in view of his great influence upon Greek thought and life. As a teacher Socrates did not write books, ironically assumed ignorance, did not lecture, but conversed, and "could not make a long speech," he playfully said. So his fame as a teacher rests on the Socratic method, not on his outward results, and the main element in his method was questioning, which in his honor has come to be called "the Socratic art."

Socrates

For illustrations of Socrates' method in asking questions we may draw upon his historically minded pupil, Xenophon, who reports in his Memorabilia (IV, 7, 13):

> Whenever any person contradicted him on any point who had nothing definite to say, and who perhaps asserted, without proof, that some person, whom he mentioned, was wiser, or better skilled in political affairs, or possessed of greater courage, or worthier in some such respect [than

some one whom Socrates had mentioned], he would recall the whole argument, in some such way as the following, to the primary proposition: "Do you say that he whom you commend is *a better citizen* than he whom I commend?" "I do say so." "Why should we not then consider, in the first place, what is the duty of *a good citizen?*" "Let us do so." "Would he not then be superior in the management of the public money who should make the state richer?" "Undoubtedly." "And he in war who should make it victorious over its enemies?" "Assuredly." "And in an embassy he who should make friends of foes?" "Doubtless." "And he in addressing the people who should check dissension and inspire them with unanimity?" "I think so." When the discussion was thus brought back to fundamental principles, the truth was made evident to those who had opposed him.

Further illustrations may be found in the earlier dialogues of Plato, especially in the "Gorgias" and "Protagoras."

From a study of these illustrations we will find several characteristics of the questions asked by Socrates, viz.:

(1) They are "leading" questions in form, — the interlocutor always knew the answer Socrates wanted him to give, though he was not always ready to give it. This is a blemish in the art of this great master of teachers.

(2) They are based on concrete data, on illustrations drawn from daily Athenian life, about which the whole company of listeners would know. Socrates began with the known, concrete, empirical percepts.

(3) They call for a definition of terms, for the formation of concepts, for a generalization based on experience, for the formulation and establishment of a principle. Socrates moved from the concrete to the abstract, the concept, the rational, which at the start was the unknown.

(4) They made the young men to whom they were put think for themselves; the dialogues of Plato, which embody these questionings of Socrates, in the hands of a skilful teacher or mature reader still do the same. Socrates was a developer of mentality through the practice of judgment based on observation.

(5) They were logical in character, following on from admitted principles to new and often unwelcome conclusions. His pupils sometimes objected to being led by insensible degrees into a conclusion inconsistent with the views ex-

pressed in their initial ignorance. But Socrates never laughed at them, because he claimed to be removing his own ignorance also by the process.

(6) They often went unanswered, even by Socrates himself. He would leave them to ferment in the minds of his pupils. For this reason many of the earlier dialogues of Plato, which are just Plato's literary expression of a Socratic conversation, end negatively; for example, the Theætetus, whose question is, What is knowledge? But Socrates was very ready to undertake the answer of any question raised by an auditor. In fact, the very life of Socrates was a question-mark in the presence of his fellows. The following passage will show how Plato's literary genius clothes this fact.

At the conclusion of the Apology, Plato represents Socrates as considering the question whether to die is gain. Socrates continues:

> Above all, I shall then [after death] be able to continue my search into true and false knowledge, as in this world, so also in that. And I shall find out who is wise, and who pretends to be wise and is not. What would not a man give to be able to examine the leader of the Trojan expedi-

tion; or Odysseus, or Sisyphus, or numberless others — men and women too! What infinite delight would there be in conversing with them and asking questions! — in another world they do not put a man to death for asking questions; assuredly not.[1]

The preserved illustrations of the questions asked by Jesus are to be found in the four gospels where they may be studied with profound profit by any teacher. Many of them are in our minds already, only we have not thought to inquire as to their characteristics, with a view to imitating their excellencies. When we do so inquire, we note several similarities between the questions of Jesus and those of Socrates, as well as dissimilarities.

Jesus

(1) Unlike Socrates, Jesus did not employ the leading form of question. He stated his question in an unbiassed way and left the mind of his hearer to react independently upon it without any suggestion as to the correct answer. For example: "Which of the two did the will of his father?" In this respect the questions of Jesus are superior to those of Socrates.

[1] Plato, Apology (Jowett Tr.).

(2) Like those of Socrates, the questions of Jesus are based on concrete illustrations. But in the case of Jesus these illustrations, though drawn from the experiences of simple life, are presented in those consummate word pictures known as the parables, fashioned in the workshop of an artist's soul. For example, after the parable of "The Good Samaritan" came the question, "Which of these three, thinkest thou, proved neighbor unto him that fell among the robbers?"

(3) Again, like Socrates, Jesus made his pupils think by means of his questions. He secured self-expression from his auditors, as a basis for further assistance from him. For example, before any great work of healing, "Believest thou that I am able to do this?" And after the parable of "The Vineyard," "When therefore the lord of the vineyard shall come, what will he do unto those husbandmen?"

(4) Again, like Socrates, Jesus did not always answer his own questions, but left them sticking in the minds of his hearers. Some of

these were rhetorical questions, stronger for being unanswered; for example, "Do men gather grapes of thorns, or figs of thistles?" One of these questions his enemies could not answer and he did not, viz. "If David called him lord, how is he his son?" By the way, what is the answer to this question?

(5) Again, his questions were very practical; they were aimed at the control of conduct and the formation of character. His questions are more practical than those of Socrates. Both of these superior teachers were interested more in man than in nature. But whereas Socrates would secure virtue mediately by way of knowledge, Jesus would secure virtue immediately by way of feeling and will. Socrates emphasized the influence of ideas on conduct, Jesus the influence of conduct on ideas. The immediate aim of Socrates was a new type of thinking, of Jesus a new type of living. Illustrations of questions asked by Jesus to control conduct are: "Why beholdest thou the mote that is in thy brother's eye, but considerest not the beam in thine own eye?" "What

shall it profit a man if he gain the whole world and lose his own soul?"

(5) Finally, the questions of Jesus were very personal. They took hold of the reins of the individual to whom they were addressed. Socrates asked of Theodota (Xenophon, Memorabilia, 3, 11, 1, *seq.*) information concerning her art of enticing lovers; Jesus asked of the woman of Samaria a drink of water to quench his thirst that he might awaken her soul to the higher life. His was a very personal question to the lawyer, "What is written in the law, how readest thou?" Likewise it was a very personal question he addressed to his disciples, "But whom say ye that I am?"

On the whole it is small wonder that the questions of Jesus so impressed themselves upon the memory of his hearers that they could be recalled a generation later and written down, that he impressed them as one having authority, even the authority of personal experience, and that he seemed to them to speak as never man spake. A newly discovered reputed saying of Jesus is: "They who question shall reign."

From many modern instances that might be taken, let me select the famous one of Dr. Mark Hopkins, for thirty-six years president of Williams College, retiring in 1872. Former students of his have told me he was a famous questioner in three respects, viz. (1) keeping the unity of the class as it thought out the answers; (2) keeping the unity of the subject by the logical arrangement of his questions; and (3) stimulating the thought of the individual, so that students would continue to discuss his questions after the class was dismissed. This modern instance particularly may encourage us all to strive to be great questioners.

Mark Hopkins

A skilful lawyer at his work in the court-room may show us many things about questioning; it would repay us as teachers to visit sessions of the court, in order to study human nature in general and the lawyer's method of questioning in particular. There are two forms of questioning used by the lawyer; one, the direct examination of his own witnesses, in which case "leading"

The Lawyer

questions are barred by the rules of evidence; the other, the cross-examination of the witnesses of the opposing attorney, in which case leading or even misleading questions are admitted. The teacher is not concerned with the questions in cross-examination; he is only examining directly his own witnesses.

From a very human book[1] I copy a few "Golden Rules for the Examination of Witnesses," usable also by teachers. "If they [your own witnesses] are bold, and may injure your cause by pertness or forwardness, observe a gravity and ceremony of manner toward them which may be calculated to repress their assurance.

"If they are alarmed or diffident, and their thoughts are evidently scattered, commence your examination with matters of a familiar character, remotely connected with the subject of their alarm, or the matter in issue; as, for instance, where do you live? Do you know the parties? How long have you known them?

[1] Wellman, F. L., The Art of Cross-Examination, Chap. IX. Quoted from D. P. Brown, Golden Rules for the Examination of Witnesses.

etc. And when you have restored them to their composure and the mind has regained its equilibrium, proceed to the more essential features of the case, being careful to be mild and distinct in your approaches, lest you again trouble the fountain at which you are to drink.

"Speak to your witness clearly and distinctly, as if you were awake and engaged in a matter of interest and make *him* also speak distinctly and to your question. How can it be supposed that the court and jury will be inclined to listen, when the only struggle seems to be whether the counsel or the witness shall first go to sleep?

"Modulate your voice as circumstance may direct. 'Inspire the fearful and repress the bold.'

"Never begin before you are *ready*, and always finish when you are done. In other words, do not question for question's sake, but for an *answer*."

The whole chapter from which these passages are quoted will reward the teacher who reads it.

My final injunction to teachers on the matter of questioning is: we must be more than

questioners of pupils concerning the known, we must be also questioners of life concerning the unknown; the former is for our pupils, the latter is for ourselves. Bacon defined an experiment as a question put to nature; it is the basis of all scientific progress. We may define philosophy as a question put to the world at large; it is the culmination of all intellectual progress. For the sake of our teaching and ourselves we must be constantly questioning both men and things concerning what we do not know; only so can we question vitally our pupils concerning what we do know. The sense of the unknown by contrast quickens our appreciation and realization of the known. Only as we question do we know; only as we grow ourselves can we wisely help others grow. Life itself is a question, a continuing experiment, a process of trial and error, the hunt for an answer that no man has as yet fully found.

The Larger Questions

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Questions on the Art of Questioning

1. What recognition did Plato give to questioning?
2. Give five reasons why it is important to question well.
3. Why is a good question an aid in securing attention?
4. What are four general purposes of questioning?
5. What is involved in "setting forward the attainment of the class in a given field"?

6. Name, describe, and illustrate the four kinds of questions.

7. What use may be made of the auxiliary question in lecturing to older pupils?

8. What are some of the specific purposes of the searching, or heuristic question?

9. Give some elementary and advanced questions on Lincoln's Gettysburg Oration.

10. Distinguish the secondary and primary purposes of review questions.

11. Prepare some drill and some unifying review questions in your favorite subject.

12. What are the two purposes of an examinational question?

13. Name six characteristics of the manner in which questions should be asked.

14. Name five characteristics of the form of the question.

15. Name five characteristics of the content of the question.

16. What ought the characteristics of the teacher as questioner to be?

17. Name three desirable characteristics of the answer.

18. Why are written answers sometimes desirable?

19. In what way should an incorrect oral answer be treated?

20. What types of answer should be discouraged?

21. Name six characteristics of the questions of Socrates.

22. Name six characteristics of the questions of Jesus.

23. Compare the questions of Socrates and Jesus.

24. Describe Mark Hopkins as a questioner.

25. What may teachers learn from lawyers about questioning?

26. Why should teachers ask questions of nature and of life?

Suggestions for Further Study

1. Trace the history of questioning as an educational method.

2. Compare the relative benefits of questioning pupils and talking to them.

3. What is the difference between involuntary and voluntary attention? (See any Psychology.)

4. Frame a good definition of teaching.
5. Who was Tuiskon Ziller?
6. What is the etymology of "heuristic"?
7. What is "the point of contact" in teaching?
8. How is clear speaking or writing related to clear thinking?
9. What is meant by "the adolescent mind"?
10. Formulate six good heuristic questions on the subject, or subjects, you teach.
11. Formulate elementary and advanced heuristic questions on Washington's Farewell Address.
12. Under what circumstances may the review of a subject be omitted?
13. Consider the good and bad effects of examinations.
14. Prepare three examination questions that test judgment.
15. What criticisms would you make on your own manner of questioning?
16. What criticisms would you make on the form of your own questions?
17. What criticisms would you make on the content of your own questions?
18. How many questions do you ask in a forty-five minute period on the average? Is this too many?
19. What light on our own teaching do the naturally humorous answers of pupils throw?
20. Study the questions of Socrates in the Memorabilia of Xenophon.
21. Study the questions of Jesus in the gospels.
22. Was Socrates or Jesus the better questioner? Why?
23. How does the purpose of the teacher differ from that of the lawyer in questioning?
24. Formulate some questions whose answers you do not know.

CHAPTER III

THE ART OF STUDYING

The New Interest in this Subject

THERE is a gratifying increase of interest to-day in the art of studying. Teachers are asking, as never before, I believe, in the history of their profession, how they themselves ought to study and how they may get their pupils to study in the best way. Several new books on the subject, referred to in the list at the end of this chapter, have been put forth to meet this demand on the part of teachers and to help stimulate it too. For once one can hardly refer to this increasing interest as a revival of an old one; it is a new phenomenon. The only thing comparable to it heretofore occurred at the time of the Renaissance and after, when the humanistic scholars like Erasmus were concerned with the right method of study along with their interest in the classics. Following in the wake of the Revival of Learning certain philosophers

like Bacon, Locke, and Descartes were concerned with the methods of investigation, the conduct of the human understanding, and the principles of clear thinking. These old writings are still worth the time spent in pondering them by the modern student. On the whole only greatly desirable results may be anticipated from the present momentum of interest in the best way to study, such as increased pleasure in the process and increased profit in the result.

Present-day Waste in Education

One of the great ideas of our time is conservation and the elimination of waste. As a people Americans are relatively thriftless and wasteful. This is largely due to our enormous resources and our prosperity, and the consequent absence of saving as a necessary virtue. This trait of wastefulness appears all through our life, even in our educational system. Perhaps the greatest single source of waste in our educational work is the wrong use of time, which we spend too much in hearing recitations and discovering what pupils have already learned and too little in training them to study. We practise them

too much in telling what they know and too little in learning how to know. Our pupils spend too much of their time in learning what the book says and too little in facing problems for themselves. The result is that our pupils leave school with a store of information but with very little ability to handle situations. We can conserve the pupils' time and eliminate much educational waste by training them in the art of study.

Definition of Study

Kant on Definition

How shall we define study? The great thinker, Immanuel Kant, said that a definition should come at the end, not at the beginning, of an inquiry. Such a procedure is inductive, Socratic, and in accord with the way the mind does move in framing a definition for the first time. But for purposes of logical exposition, it will help us to begin with a definition of terms.

Too Narrow a Definition

It is easy to define study in too narrow a way, as in Hinsdale's definition: "Study is the use of books for the serious purpose of gaining knowledge." [1] But surely one may also study man and nature.

[1] Hinsdale, The Art of Study, p. 18.

Let us try this definition: *Study is the mental process of mastering a problem.* This problem may be of any kind whatsoever, involving things, or words, or both. As the Greek etymology of the term suggests, a "problem" is "something thrown before" the mind, some obstacle to be surmounted, some situation requiring serious thought to handle it aright, some difficulty requiring a solution. Everybody in every walk of life must at times face real problems and try to solve them. Study is the mental process by which this is done.

Definition

That real study involves an application of the mind to the matter in hand will not be questioned, an application not always agreeable in itself, though its ultimate consequences are. As the educational proverb, attributed by Diogenes Laertius to Aristotle, and repeated by Plutarch and Alcuin, has it: "The roots of learning are bitter, but its fruits are sweet." Study is indeed mental application, but what we need to know is how the mind works in applying

Mental Application Involved

itself to any problem. We can take up this question best, however, a little later in immediate connection with the practical topic, how to train pupils to study. For the present let us consider certain large matters concerned with the approach to the subject of study.

General Presuppositions of Study

There are certain general presuppositions which must be taken for granted if study is to prove very fruitful. One is that study is a certain type of life, that is, in case we are to be constantly progressing. It is artificial to call certain young people in school "students" and not allow the term to others or to the same persons later in their lives. The fact is, the real student spends his whole time either in studying or in preparing to study. Again it is artificial to suppose one can be too busy in any human relationship to find time for study; rather, our human business is a shining opportunity for study. A purely mechanical occupation soon exhausts our ability to study it. Teachers in the schoolroom, if they will, may study their

The Life of Study

pupils as well as teach them, and so come to teach them better. So may parents in the home. So may all persons whose occupations involve relationships to life.

Many Interests

Again, the real student has many interests. Not enough, indeed, to scatter his forces, but he has enough to meet his fellows on their plane of interest without always or usually requiring them to come to his plane. The student has his specialty which he should let spread out through its relations to many different things. To have many such secondary interests counteracts the deadening influence of routine, prevents narrowness, promotes sociality, and discourages eccentricity. To have many interests is like fishing with many baited hooks in the stream. Among his many ramified interests in life is a central one. This is his main object of study. It engrosses the most of his attention, and the attention he gives to it is involuntary, without the sense of compulsion, and accompanied by pleasure. He warms his soul at this central hearth stone, though he is often chary of admitting others

here, for fear of thrusting his interests on others and "talking shop."

Independence

There is no real study without independence: independence of judgment and, to a certain extent, independence of the deadening routine of a mechanical occupation. The student must have some free time to think his own thoughts as well as to master the thoughts of others and to observe his problem for himself. The logicians warn us of the fallacy of paying undue respect to a noted authority,—*argumentum ad verecundiam.* This warning is especially applicable when an authority noted in one field is invoked to settle a question in a different field. One is entitled to respect as an authority in a field only in proportion as he has mastered the problems of that field. The aim of the real student is, or should be, to master the problems in his chosen field for himself. He learns from all, but he does his own thinking.

At the conclusion of one of his arguments Professor Paulsen remarks, "And after all, when we come to think of it, error alone is

dangerous; things are what they are; how can true ideas concerning them harm us, or false ones benefit us?" [1] In accord with the spirit of this remark of a great student and teacher, we may say the true student is a lover of truth. He looks for the truth, in systems and beyond systems, in doctrines and beyond doctrines, in science and beyond science. He is bound by no traditions except those whose inherent truth is still a vital force. In his inward soul he subscribes to those great words written in his private diary by the noble Roman Stoic and emperor: "If any man is able to convince me and show me that I do not think or act right, I will gladly change; for I seek the truth by which no man was ever injured. But he is injured who abides in his error and ignorance." [2] This is intellectual hospitality, candor, sincerity, honesty, which are inseparable from the love of truth.

The Love of Truth

Aristotle wrote in the first book of his Ethics, having Plato, who had been his teacher for

[1] Paulsen, Introduction to Philosophy, p. 74 (Thilly Tr.). N. Y., 1898.
[2] M. Aurelius, Thoughts, VI, 21 (Long Tr.).

twenty years, in mind: "Our friends and truth are both dear to us; but it would be impiety not to give the first place to truth." Commenting on this statement, Burnet [1] says, "This has become almost proverbial in the form given to it by Cicero, 'Plato is my friend, but truth is more so.'" Thus truth requires of the student a kind of impersonal allegiance.

Aristotle Quoted on the Love of Truth

The real student loves the truth that he may become free himself, free from ignorance and its consequences, and also that he may help make men free. It is only in fun that we can say with Pudd'nhead Wilson, "Truth is precious, therefore let us be saving of it." Jesus taught, "The truth shall make you free," and that we are witnesses to the truth.

Truth and Freedom

The ideal of the student is knowledge and its use. The truth in its eternal nature may be one and unchangeable, but man's knowledge of the truth is a constantly unfolding and growing process, and man's use of such knowledge lags

[1] Burnet, Aristotle on Education, p. 21. Cambridge, 1905.

still behind. The real student loves the truth so well that he is willing and glad to have his false or inadequate views of it refuted or enlarged. The sense that the whole truth is now known is the grave of the student's enterprise and power. The soul of the teacher who supposes he need not study any more is already dying.

The Habit of Study

In what was said above concerning the life of study it was implied that study should be both a habit and an ideal. Study should be so ingrained as a habit as to have become a second nature. The real student is studying men and things even when he is not aware of doing so, and without having especially set himself to do it. Without such a mechanism, such an automatism, at the basis of study we can hardly hope to arrive anywhere or to derive the best benefits. We must avoid "the agony of starting," we must have regular, but in no case rigid, study-hours, we must allow adequate time for physical and mental recreation in the open air and with our fellows, we must sleep as much as we require

for best work, and we must eat a merely sufficient quantity of wholesome food. It is unwise economy for the student to neglect the claims of the physical man in any way. Study cannot be the efficient habit it should be without a dependable supporting physique.

The Ideal of Study

We must also presuppose on the part of the student that study is not only a habit, but also an ideal. When under new circumstances his habit fails him, his ideal will carry him through; and when under old circumstances his habit fails him through the deadening effects of routine, his ideal again will come to his aid. Study is an ideal for the student because he has the will to know as its efficient cause and the purpose to enable both himself and others to profit by his attainment as the final cause. There is no study that avails apart from the student's real desire to learn, apart from genuine interest in the subject-matter. Too frequently this will to learn is absent from the lives of pupils and teachers. Really it should be the culmination of the child's instinct of curiosity; too often this instinct is

deadened by compulsory routine. Teachers must fight to keep alive the strong native instinct of curiosity in their pupils and in themselves. Truth cannot reveal itself to listless worshippers.

From these general presuppositions of study, which help us to approach the subject in the right spirit, we turn now to more practical matters.

The important thing in connection with the mechanical aids to study is that each individual student should develop his own. The great Orientalist, Max Müller, found the paper-pad note-book of indispensable aid, and recommended its use to Oxford students. A file of references on each of the main subjects of interest to the student is a great aid when the time comes to master and to use the knowledge of any particular topic. The making of a card-catalogue, if not too troublesome, will serve the same purpose. Every periodical issuing an index will be carefully filed away. The making of bibliographies, as the better books come

Mechanical Aids to Study

References

to one's attention, is most serviceable. Even newspaper clippings, when they are evidently dependable, are well worth while.

Every student will take pride in his private library, which is his workshop, the one essential qualification of which is that it be a growing one. It is not important to own many books: it is important to know well those you do own; it is not the having but the knowing of books that counts. Naturally one will keep a list of books to buy, and, as most students are not large money-earners, will be on the watch for advantageous sales of books; but he will never buy for the sake of buying, but only to satisfy a real need. The student who would be a scholar must command other languages than his own, as tools. Then, too, there should be a place for everything that comes to one's desk; a glance will indicate whether the waste-basket or some particular pigeon-hole is the right place.

One's Library

But the most profitable single mechanical aid to the student is to have a weekly program of work, indicating how the waking hours should

be spent. Such a program will allow ample time also for recreation, social duties, and desultory reading. The length of the day is the same for all alike; given the same capacity for work, those accomplish most who have the best program. It will require a delicate application of one's philosophy of life to construct this plan of how to spend one's time in the best way. Without some such schedule, we lose much time in deciding what to do next, and then are not quite sure whether we have decided aright. From this account of the mechanical aids to study we learn that the aim of the student is not to know everything but where to find anything he needs, that the brain is not so much a repository of knowledge as an instrument for gathering it, and that study is a continuous process of gathering usable truth.

Program of Work

As there are mechanical aids to study, so also there are physical conditions of study. These conditions, as those aids, require no extended treatment here; it is enough for our present purpose to

Physical Conditions of Study

indicate their importance by calling attention to them and by a passing mention.

First of all the physical conditions is the rested brain and the not-too-tired body. It hardly pays to undertake serious study when the brain, the instrument of the mind, is already fagged, or when the body is exhausted from any form of muscular exertion.

Brain and Body

Then, the light should be right, preferably from the rear or, in the case of right-handed persons, from the left. The eyes should be shaded and in no instance should the angle of reflection carry the light waves into the eyes. Reading in the sun, or lying down, or when in rough motion, as on the usual trains, is objectionable. Under these circumstances one might better occupy his mind, if alone, in reflecting on what he has read and in planning;[1] but if read he must, let it be from a text in large print. The paper should be unglazed, the lines not too long, for the sake of economy in eye-motion for rapid readers, and with good spaces between the lines.

Light

[1] Cf. Arnold Bennett, How to Live on Twenty-four Hours a Day.

The best temperature for health in the study or schoolroom does not exceed 68°. For good ventilation one must rely upon his reason and his sense of drowsiness, not upon his olfactory nerves which quickly fatigue under any constant stimulus such as vitiated air provides. One's study should be located in a quiet part of the house, and the study-hours should be kept as free from interruption as possible. The best physical conditions for study are not always to be had, especially as regards quiet and freedom from interruption, and the good student who regards his time not as money but as beyond all money will learn also how to work under disadvantages; he will make the conditions conform to his standard when he can, and when he cannot, he will conform to the conditions. Through the act of willing what is annoying, though inevitable, the mind rises superior to thwarting circumstance.[1]

Temperature and Ventilation

Thus at length we reach that phase of our topic which was probably first suggested to the

[1] I. Kant, On the Power of the Mind.

mind of the reader at the sight of the title of this chapter, viz. How shall I study? Immediately following this question belongs the related one, How shall I train my pupils to study? for, of course, the way to train my pupils to study is just the practical application of the way I should study myself. And immediately connected with both these questions is a third, How shall I teach? though this last can receive but brief treatment in the discussion of study. Studying, training pupils to study, and teaching are three closely related processes. Good teaching is certainly a great aid to pupils in learning how to study, but it is not alone sufficient.

How to Study

Three Related Questions

How shall one study? A short initial, very suggestive, and yet inadequate answer would be, apply the Herbartian formal steps of method to oneself; that is, teach the lesson to yourself in the approved fashion before teaching it to others by (1) preparing your mind to undertake the work; (2) covering the material point by

Teaching Oneself by the Herbartian Formula

point; (3) comparing the various points; (4) generalizing; and (5) making applications of the generalization.

There are indeed some valuable hints here for the process of studying, especially in studying books, as we shall see, but there are also several weaknesses, viz. (1) you must already know the lesson before you can teach it to yourself in this way, and how did you study in the first place in order to master the lesson? (2) This method of study would apply very well to books, but how would it apply to things, in the study of which observation, hypothesis, verification, etc., play so large a rôle? (3) This method of study takes no account of the motives regularly prompting us to study, such as some felt need or practical problem. And (4) this method of teaching and studying is better suited to the imparting of knowledge than to the development of ability in handling new difficulties.

Weakness of this Procedure

If we cannot accept the Herbartian intellectual formula for teaching as a guide in our own study, how then shall we study? An

analysis of a completed study process reveals just four main types of mental operation, viz. (1) facing a problem; (2) hunting for a solution; (3) recognizing the right solution; and (4) using the solution. So long as what we are doing proceeds successfully and smoothly, there is no problem and we do not study. But as soon as some hitch comes in the process of acting, then we halt, begin to study, hunt for a solution, sometimes hitting upon it almost or entirely by accident, recognizing it when we have it, and using it.

Four Phases of the Study Process

A simple illustration will show the four phases of the process. A farmer is ploughing in a rough field. He strikes a tough root and breaks the end off the point of his plough. What shall he do? He canvasses all the possibilities in his mind, such as going on with a broken point as best he can, going away to get a new point, changing his work from ploughing to hoeing, etc. Finally, he decides it is best to go after a new point, does so, and then proceeds with his ploughing as

Illustration

before. If he is wise, he will bring more than one new point; and if he had been still wiser, he would have anticipated breaking a point in that field and would have come provided. This is a type of all real study. A problem arises, usually unexpectedly; we try to find a solution; the solution is finally recognized, if we are able to solve the problem at all; and, applying the solution, we proceed as best we can until a new problem arises.

Take another illustration. A boy is interested in birds. He hears a new note. It puzzles him. He cannot identify it. It is like that of a hermit-thrush, but it is not a hermit-thrush's. He sights the bird. It is reddish brown above and faintly spotted with brown below. Home he goes with all his observations in mind, regarding the song, the size, the color, the shape of the new bird. He eagerly consults his bird-book for identification. Finally he decides it is a veery, and plans to see and hear his new acquaintance again. This is typical of real study. Out of a real situation comes a new interest, need, or problem;

Another Illustration

it is faced and met; the solution finally comes; the solution is used. Sometimes it takes years to find the solution to a difficult problem.

The situation is not different in pure research. One has an interesting problem. It may be only a theoretical and not a practical problem, but it is interesting. To satisfy this interest is practical in a broad sense of the term to the scientist devoted to research. The observations and experiments are many. Finally, it may be after years, the solution is found. It works. The interest is satisfied. Meanwhile another interest, perhaps many of them, has been developed. One of these is taken up and pursued. It may be laid aside in discouragement for a while, and then taken up again. Such a student we call a pure scientist. He is discovering truth, not caring whether it is immediately practical. It satisfies his interests to go on. By and by some practical genius may turn to good account the discoveries of the scientist, improving thereby the lot of mankind. So actually did Marconi in devising the wireless telegraph on the

Pure Research

basis of the pure researches of J. J. Thomson and Lord Kelvin.

All this may seem remote enough from school study, and it may be, but it should not be. These illustrations show us what real study, in distinction from formal study, truly is. First a problem, then the attack on it, then the solution, then the use of the solution. During the process we are really interested, attentive, have lost the sense of time, have found out something, have expressed ourselves, and have the sense of dealing with real values.

How Shall I Study? The Problem

How then shall I study? First, get my problem; my life itself gives it to me, many of them in fact; sometimes several in a day. Sense it. Realize the need of solving it. Real study always has a purpose in it, a motive behind it.

The Hunt

Second, hunt for the solution. This is indeed a complex and varied process, dependent for its character somewhat upon the problem itself, whether bookish, naturalistic, etc. But in hunting for the solution it will always help us (1) to use all the

knowledge we already have; (2) to have some guess in mind as to what the solution is; (3) to get all the facts bearing on the question we can before us, by observation, reading, conversing with others, etc.; (4) to analyze our problem or material into its essential and component parts when we can; and (5) to be constantly testing the guess we have in mind and as constantly putting it aside for another one until the happy solution is reached.

Third, we recognize the solution which we seek. The answer has been found. We can recognize the solution when finally found because it works, solves the difficulty, answers the question. The fortunate guess we made has been verified. And when found, we must formulate the answer definitely, give it a name, state it as a proposition, conceive it in general terms, and fix it in mind. So we keep it for use.

Finding the Solution

Fourth, set the solution to work. What difference does it make to life and conduct? What does it lead us to do? What suggestions about further truth does it awaken?

Use

What related problem may have the same or a similar solution? Shall the truth be done? What person, or class of persons, needs to know this truth? So the truth begins to shape and inspire life.

Thus we find four main factors in the mental process of mastering a problem which we call study, viz. the sense of facing a problem, the search for the solution, the solution itself, and finally its use. In a somewhat more detailed way Dr. McMurry, in his recent very valuable book on How to Study, finds eight factors: viz. purpose, supplementing, organizing, judging, memorizing, using, questioning, and individuality.

The bare statement of these eight principal factors in study according to Dr. McMurry should be supplemented by one of his own summarizing paragraphs on "the meaning of study," as follows:

> True or logical study is not aimless mental activity or a passive reception of ideas only for the sake of having them. It is the vigorous application of the mind to a subject for the satisfaction of a felt need. Instead of being aimless, every portion of effort put forth is an organic step toward the accomplishment of a specific purpose; instead of being

passive, it requires the reaction of the self upon the ideas presented until they are supplemented, organized, and tentatively judged, so that they are held well in memory. The study of a subject has not reached its end until the guiding purpose has been accomplished and the knowledge has been so assimilated that it has been used in a normal way and has become experience. And, finally, since the danger of submergence of self among so much foreign thought is so great it is not complete — at least for young students — until precautions for the preservation of individuality have been included.[1]

There is evidently no contradiction between the list of four and the list of eight factors. The difference is that the list of four looks at study as the mental process of mastering a problem, bringing out the indispensable essentials in this process, while the list of eight includes certain related matters like memorizing, maintaining the questioning attitude, and preserving individual initiative, which we have stressed, or which we shall have occasion to stress, in another connection.

The four main factors of study appear in mastering every problem, whether of life, laboratory, or book. But so much of the time

[1] F. M. McMurry, How to Study, p. 283. Boston, 1909.

of teachers and pupils alike is spent in studying books, and necessarily so, that these four factors should be restated from the standpoint of mastering an assignment in a text. And here using, with modifications, the Herbartian formula on oneself is more suggestive, as this formula is more successful in learning or in imparting what is already known than in discovering for oneself what is unknown.

How to Study a Text

First, as before, define the need which prompts you to study. What need have I leading me to undertake this piece of intellectual work? At what problem am I working? This felt and formulated need should be at the basis of every piece of study.

1. Define Your Need

In connection with defining one's need, it will also be profitable to revive your present knowledge of the subject. What do I already know about this subject? To answer this question will help define your need, will increase your apperceiving power, will enable you to take a more independent attitude toward what you read, and

Awaken Old Associations

will enhance the suggestive power of the material before you.

Then, go through the material, whatever it is, leisurely, and with concentrated attention, and pick out the main points; that is, analyze the subject studied. Study leisurely that the pertinent associations of the subject may have time to come into mind, that you may stop and think out a suggestion to its end, that your critical faculty may react. James Bryce gives us this advice: "One should read in a critical, that is to say, a searching, testing spirit. Our spirit ought, no doubt, to be respectful to the author of the book, if he happens to be a well-informed man; but respect is not the same thing as submission."

2. Analyze

Milton [1] likewise urges reading independently upon us, as follows:

> However, many books,
> Wise men have said, are wearisome; who reads
> Incessantly, and to his reading brings not
> A spirit and judgment equal or superior,
> (And what he brings what needs he elsewhere seek?)
> Uncertain and unsettled still remains,
> Deep-versed in books and shallow in himself,

[1] Paradise Regained, Bk. IV, ll. 321–331.

Crude or intoxicate, collecting toys
And trifles for choice matters, worth a sponge,
As children gathering pebbles on the shore.

Studying leisurely in this way is the golden mean between idle reading as a mere pastime, taking an intellectual stroll, on the one hand, and cramming the mind with undigested and unrelated facts, on the other hand. I do not say never stroll and I do not say never cram; both operations have their uses; but neither of them is true, purposeful, growth-securing study. Studying with a concentrated attention is again a mean, distinguished on the one hand from the wandering or divided attention, which is as much interested in other things as in the business in hand, and the strained attention based on the keyed-up nerves of the student. President King writes so well on this point that I must let him speak:

There is study and study. Much that is so called hardly deserves the name. And the kind of study that a man does affects the whole man. Many students would gain by shortening their hours of so-called study, by stopping more frequently for brief periods of rest, and by studying with determined concentration while at it. This

does not mean working on one's nerves, in a tense, strained attitude of mind, but cool, calm, steady attention to the work in hand, and to that alone, even if the mail comes in the midst of one's study. It is a great epoch in a student's career when he has had experience of the joy and achievement of the best concentration of which he is capable. Now he knows what study means, and he cannot again content himself with sitting before an open textbook, while from time to time he recalls his mind from the ends of the earth.[1]

Study leisurely, with concentrated attention, it was said, picking out the salient points as you go. This last is analysis; it involves perception; it gives the mind the concrete data, facts, and the important details; it eliminates vagueness from one's knowledge, "blindness" from your general notions, as Kant would say. By dividing you have conquered.

Then, at the end of your material, review the whole in mind and formulate your concept of the subject. Reach a general notion concerning the essence and drift of what you have studied. Synthesize your percepts. This means intellectual grasp and vision; your mind has risen above its material and sees it whole.

3. Synthesize

[1] H. C. King, Rational Living, pp. 134–135.

Finally, recur to your initial need with the question, How does this material satisfy my need? How can I apply my knowledge of this subject? What use can I make of it? How can it be made to function in my life or in the lives of others? This is application, practice, "doing the truth." With this final stage you have completed the circuit; you began in need and you end in its satisfaction. You are then ready to continue acting in the light of knowledge acquired by study until a new need arises, which halts your process, and sends you back again to your study. To act without study is to be "the man-in-the-street"; to study without acting is to be "academic"; to act till you need light, to study till you get it, then to act in the light of study till you need more light, is to be a complete student; it is also to be a complete man, "thoroughly furnished unto all good works."

4. Apply

The four factors emphasized in the study of a text, viz. initial sense of need, analysis, synthesis, and application, naturally cannot all

be utilized in the mastery of a single assignment of a few pages, nor is this necessary. It now appears that Herbart himself never intended the formal steps to be followed in each lesson, but applied only to considerable bodies of material.

Training Pupils to Study

At this point we pass from the question of how to study to the related one, training pupils to study. This is the practical question for which our analysis of the process of study has been preparing.

Difficulties in Learning to Study

It is not an easy thing to learn to study. Real difficulties are in the way. Among these we may mention (1) the complexity of the process itself; (2) the many outside interests of children, which, however, if rightly correlated with school work may become a wonderful aid; (3) the tendency of children to get what the teacher wants in the quickest way possible, especially by asking somebody that knows instead of finding out for themselves; (4) the general wearisomeness of school duties, which, however, can be largely met by re-shaping those duties

to meet the real situations of life; (5) the failure in the assigning of work to make the problems definite and to suggest how to go about the solution; (6) as previously indicated, poor mechanical aids and poor physical conditions in home and school for study; (7) poor teaching, which does not provide proper stimulus to study, and (8) lack of time provided for study in home and school.

At What Age should Children be Taught to Study?

At what age should we begin to train children to study? As soon as a child can ask a question. This is none too soon to begin. The question asked by the child is the sign that a problem is already being faced. Children learn more in the way of skill and adaptation to environment in the first five years of life than during any succeeding period of five years. In answering questions, give information when you have to do so, but when you can, call the attention of the questioner to certain facts that will enable him to answer his own question. This is the beginning of training in observation, collection of facts, and judgment, which are

of the essence of all study. With advancing years through kindergarten, primary grades, grammar grades, secondary school, college, graduate or professional school, research work in life, the same method of study holds, with ever deepening and widening significance; a question put to oneself, the gathering of data, its sifting and ordering, the testing of an hypothesis, final verification, then the use of the truth so gained. Children of all ages should be taught to study, but the problems must be selected and simplified to suit the age and capacity of individual children. It was a wise word that Dr. Arnold said to the Rugby boys: "You come here not to read, but to learn how to read."

A Report Quoted

This matter of teaching pupils how to study has been agitating the minds of American educators more or less for some twenty years. Let me quote from a report on "When and Where shall the Child Study?" made several years ago by a special committee to the then City Superintendent of Cincinnati, W. H. Morgan, as follows:

Nothing shows the weakness of our system more than the absence of a time for intelligent study in school under the guidance of the teacher. Programmes set apart a time for everything else but this essential thing. The pupil at a given time must be shown how to study in the presence and by direction of the teacher. In what does this "how" consist? It is partly in the way to analyze the subject, to see its prominent points, the consecutive order of thought in it, the meaning of its language, the method of finding supplementary information, etc. There must be a division of classes, a time set, instruction in the way to study, and a set habit of study. We have too much recitation and help and too little silent study in school by pupils who have been prepared for it. Let the pupil show you occasionally his way of studying to see if he has acquired any.[1]

Study with the Pupils

In accord with the suggestion of this quotation we may indicate several ways in which teachers may train pupils in the art of study. First of all, teachers must study with the pupils and let the pupils see how they themselves would set about mastering the problem or assignment. Get pupils to help you in the conduct of the recitation itself; as, for instance, in stating the aim of the lesson, selecting the main points, condensing the truths

[1] Rep. U. S. Com. Ed., 1890–91, Vol. 2, p. 1050.

of the whole into a single statement, and seeing the bearing of the lesson on living. For acquainting pupils with the method of study, there should be a study period in the schedule; where such a period is lacking a portion of the recitation period itself may be profitably given to learning how to study. Comenius[1] wrote: "It is therefore cruelty on the part of a teacher if he set his pupils work to do without first explaining it to them thoroughly, or showing them how it should be done, and if he do not assist them in their first attempts; or if he allow them to toil hard, and then loses his temper if they do not succeed in their endeavors."

One of the criticisms passed by John Stuart Mill on the methods used by his father in teaching him was: "Though he told me how to read, he never showed me by doing it himself." Example, then, is the first way by which we should teach our pupils how to study.

Recurring to the four elements in the study process, how shall we bring the sense of the

[1] The Great Didactic, Keatinge, Ed., p. 138. London, 1907.

problem home to our pupils? Whether they are studying at home, or during the study period, or during a portion of the recitation period devoted to study, first of all they must sense the problem. Ways in which this can be done are: state the assignment in the form of a problem; suggest its interest and value; show its relation to the lives the pupils are living; indicate how it grows out of what has just preceded. Studying is not learning pages, but mastering problems.

Helping Pupils to Sense the Problem

How shall we assist pupils properly in hunting for the solution of the problem? By giving them a series of questions to answer, each of which leads up to the succeeding one, and the whole list bringing them clearly in sight of the solution sought. By bringing fact after fact to attention in such an order that the answer to the question sought is clear to those with mental eyes to see. By developing the material so clearly, concretely, vividly, and analytically before them that it is mastered point by point and the way is prepared for a general view of the whole.

Hunting for the Solution

How shall we assist pupils in recognizing, fixing, and retaining the solution? It is generally reached as a concept or general notion or a principle. It grows out of the preceding step. It is mainly a matter of seeing the material as a whole. One way is to train pupils in the making of outlines, either on the board or in their notebooks. Another way is to train them in summarizing in a single statement or two the truth of the whole. Another way is the formation and test of hypotheses. The solution usually comes as an intuitive flash when the situation has been properly analyzed and presented.

Recognizing the Solution

And how shall we help the pupils to use the solution found? Mainly by assigning more problems of the same general nature requiring a similar solution. Also, by going beyond the text and relating knowledge to life. For example, in geography, pupils should draw maps of their own community, village, or city. In civics, they should learn the names of the officers of town, state, and

Using the Solution

nation. Further, they should catalogue the domestic and social needs of the environment in which their school is placed, as they can see them, and then inquire what school children can do to meet those needs. Such a problem is differently faced by every pupil. And such a method of study will do more than any other one thing to remove that academic aloofness which is the bane of American teaching.

Secure the Use of Lessons in the Home

In immediate conjunction with the foregoing thought, let me urge that teachers suggest the uses in the homes to which the lessons of the school may be put; for example, in the matter of school decorations, sanitation, hygiene, correct speech, declamation, recitation, deportment, etc. For most school children the home is the natural institution of life in which first to use what they learn in school. Such use naturally involves the cooperation of parents with teachers, and a part of the work of the teacher in training pupils to study is the enlisting of the aid of the parents. In this connection I beg the privilege of quoting McMurry again.

Parents and the School Requirements

Parents are more bent upon obtaining results and getting rid of their children — so far as school work is concerned — than are teachers, so that the duties assigned to them [the parents] should be few and of a simple character.

There are some important things for parents to do, however. They should take pains to provide proper physical surroundings for home study, including quiet, proper light and temperature. They should exert an influence in the direction of regular hours, of a short period of relaxation immediately before and after meals and before bedtime, and of some variety of occupation during the longer periods of study, so that fatigue may be avoided. In addition, they should stimulate their children by bringing pressure to bear on the lazy ones, by "hearing lessons" now and then, and, above all, by asking questions that call for a review of facts as well as for their use in conversation. They may give some help; but if they do, they should by all means avoid falling into disputes about method. The child is right in preferring to do a thing in the teacher's way, for it is to the teacher that he is finally responsible; and parents ought to be broad enough to try to follow the teacher's plan. They can help their children most by showing concern for them, really inspecting their written work instead of merely pretending to, and otherwise manifesting genuine interest in their tasks.[1]

We saw above that studying, training pupils to study, and good teaching were reciprocally related. Right study re-acts beneficially on

[1] F. M. McMurry, How to Study, pp. 305–306. Boston, 1909.

teaching, and good teaching is an aid to right study. In this connection we cannot go at length into the large question of what is involved in good teaching, but it is necessary to point out that the four phases of the study process and of training pupils to study can and should also reappear here. We may teach by telling stories, by the question-and-answer method, by the conference method, or by the lecture method; still in each of them we have (1) the problem, or situation; (2) the hunt, or development; (3) the solution, or climax; and (4) the application, or conclusion.

Good Teaching an Aid to Study

In the very form of the story itself we found the beginning, the development, the climax, and the ending, relating it to all drama and also to the four phases of the study process.

In Using the Story

In good questioning likewise, when this method is used, we should first bring out the problem, then its phases, then the solution, then the application. Especially in questioning should the topic or the problem, not so many pages of the text, be the

In Questioning

object of our questioning. The kind of questions we ask helps to set the pace for the kind of study we secure. Go behind the lesson assigned into the causes, methods, and bearing of the material. Why? How? For what purpose? The bearing on life? Such questions cannot be fully answered from a knowledge of the text, but require thought and reflection, elicit a personal reaction, and so quicken a personal interest. Pupils may also very properly be induced to ask questions themselves of the teacher and of each other.

In Lecturing

Likewise in using other teaching methods, as the lecture, or the conference, sometimes called the seminar, we will find it best and most natural to put the problem forward first, then the elucidation of its phases, then the proposed solution, then the resulting action. In this way we teach as the mind learns when it learns best.

The psychology of learning indicates that the mind first intuits vague wholes, then analyzes these wholes into parts, then integrates the whole. The procedure is from the vague

whole, to detailed analysis, to clear synthesis. So we teach reading by the word method; the word is first a vague whole recognized as a unity, then later the letters composing it are learned by name and sound, then finally the word is recognized as a clear and integrated whole. The process of evolution itself, as described by Spencer, very well fits in with the psychology of learning, viz. from homogeneity, through differentiation, to integration.

The Psychology of Learning

We have thus seen how good teaching, whatever the method used, reacts beneficially on the art of studying, illustrates and emphasizes in fact the same four features, though no one would say pupils can learn how to study, without being trained to study, merely by being well taught.

There are several additional features of good teaching which also assist pupils in learning how to study. These include the right attitude toward texts, variety, right examinations, the placing of responsibility on pupils, and the studious teacher, to each of which we will give brief attention.

Students should be given the right attitude toward their texts. A text-book is not material to be memorized unquestioningly as it stands, but to be comprehended, thought about, tested, accepted or rejected, and utilized. A text is the consensus of opinion regarding the matter treated as sensed and reported by one person. "History" does not record anything, but historians do. The selection of texts is a most important matter; one must have regard not simply to the subject to be covered, but also the manner of presentation and to the probable reaction of the class upon the text. Some texts will almost teach themselves; others will provoke the resentment of both teacher and class. In general an acceptable text is attractively bound, well printed in large type on unglazed paper, with lines far enough apart and the page not so wide as to require excessive lateral motion of the eyes, long enough to allow concrete illustration as well as abstract statements without becoming thereby prolix, with an impartial, unbiassed, undogmatic, and scholarly presenta-

Right Attitude toward Texts

tion of the field covered, and withal, in good prose style. It were desirable for pupils to own their own texts, to study them with pencil in hand, to mark important points, to annotate the margins, to criticise, and to summarize. In these days of public libraries and the social provision by the school of the texts of the pupils, the custom might helpfully be introduced of inserting loose thin blank sheets between the pages to serve the same purposes.

Utilize Many Modes of Presentation

Give to the learning mind many points of view of the same material, approach the lesson from several different angles at different times. Narrate the lesson in the third person, tell a similar experience in the first person, illustrate it with pictures, build something it describes, dramatize it, make some practical use of it. Set the imagination of children to work that in their own way they may envisage the whole. By the use of these means study realizes and vitalizes its object.

Utilize the right kind of examination. Some students will study more under the stimulus of

an approaching examination than at any other time. The examination should not be made a bugbear in the temple of wisdom, nor should it be held in itself as a whip over students before the time. The examination is the opportunity of the students to re-act in a large way upon the material covered, their last time for full self-expression in the field treated. The character of the examination itself should emphasize correct ideals in study, not stuffing the mind for a future relieving disgorgement, but assimilating knowledge for use. An examination should test ability as well as memory; thus it should contain new questions and problems, it should allow free play for criticism, and it should give the student enough range for him to show where he is strong instead of seeking to find his weak points. The pupil should prepare for an examination in the same spirit in which he habitually studies, viz. to know in order that he may be able to do.

Examine Aright

Train pupils to study at their own initiative, not always at yours. Unless study be a voluntary process, becoming finally habitual,

it cannot outlast school life. The indeterminate lesson may help pupils to study, as the indeterminate sentence helps prisoners to control themselves. Both the school and the home must place some responsibility upon the children themselves in this matter of study. After all, it really rests with them whether they become masters in science and art or not. You can compel the eye to look at the book, but you cannot compel the mind to attend. Children should be required to study a minimal amount of time, if they have to be required, and should be privileged to study only so much more; such a minimal requirement and maximal permission leaves them a measure of freedom and responsibility.

Place Responsibility on Pupils

Finally, the teacher who would train pupils to study must be himself a student. Show yourself as teacher to be a true student, always finding out new things, always using them, having a many-sided interest, never appearing dogmatic or irritated at the expression of a difference

The Teacher must be a Student

of opinion, exemplifying the best methods of accomplishment, and enjoying the life of study.

Expect the same from your students. Work for your pupils and expect them to work for you. They will, if the work you assign them is obviously putting them forward, meeting their interest and satisfying their needs. The teacher who does for his pupils what he wants them to do for him will have little cause to complain of results. And by and by a company of young scholars whose enthusiasm was quickened at his altar-fire will rise up to do him honor. America has furnished at least two rather prominent examples of this truth in the persons of Professor Garman at Amherst and Professor James at Harvard.

Herbart on the Teacher

The German teachers impress both their pupils and visitors to their classrooms with their scholarly mastery of their subjects. The thoroughness and profundity of German scholarship is without doubt partly due to the contagious influence on the pupils of teachers so capable in their subjects.

Münsterberg[1] recalls this impression of his early teachers in Germany above all others. And on this point Herbart[2] said: "Now the right kind of example is wanting, which the teacher should set — one of reading, thinking, writing, that implies complete absorption in the subject. And yet it is this example concretely illustrating how to take hold of the subject, how to present it, and how to associate it with related subjects, which effects the best results in good instruction."

In the light of our study of the art of study, we may draw certain conclusions affecting our general educational views, viz. (1) it is better for the pupil with his activities and needs to be central rather than the teacher; (2) it is better that texts should be written from the standpoint of children learning how to study than from the standpoint of the logical exposition of the subject; (3) it is better to judge our methods of teaching by the way in which pupils attack a problem than by the amount of memorized

Consequent Principles of Teaching and Studying

[1] H. Münsterberg, "School Reform," *Atl. Mo.*, May, 1900.

[2] Herbart, Outlines of Educational Doctrine, p. 105. (Lange and De Garmo.) N. Y., 1909.

information they can show; (4) it is better to train pupils to study than to rely on good teaching alone to achieve the result desired; (5) it is better to form right habits of study than to know many facts; (6) it is better for teachers and pupils to study together than for teachers to hear pupils "recite" what they have somehow acquired by themselves; (7) it is better to view the human mind as a tool for discovering needed truth than as a repository of information.

It must not be inferred from the foregoing that children who are learning how to study need not know anything. On the contrary, they will know what they know in a better way, because it has been better acquired. In fact, when we sum up the results of studying as one should, they include (1) certain standards of procedure to which to conform in attacking a problem, certain ideals of mental approach to difficult matters; (2) certain mental development of habits and skill in meeting and handling new problems; (3) certain acquisition of information, what we have found out by solving so

The Five Results of Study

many problems; (4) let us hope also, on the individual side, the gradual perfecting of conduct, bringing it into conformity as rapidly as possible with the truth discovered; and (5) let us hope also, on the social side, the increase of our effectiveness, by which we become more useful to more people. As Karl the Great wrote to the abbots of the monasteries: "It is without doubt better to do than to know, but it is necessary to know in order to be able to do."

Closely connected with the question of how to study are three others, a brief mention of which may prove welcome to some readers, viz. how to master a new book, how to make notes, and how to write a paper on some topic. These matters are constantly coming up in the lives of teachers and students.

Mastering a New Book

In mastering a new book, if you are reading for the sake of the literature or because you are to be examined upon its contents, you will read all; if, on the other hand, you are reading for facts to satisfy personal needs, you will skip judiciously. Always have some definite purpose in view in going

through a new book. Consider the position and probable standing of the author as an authority. Read the preface to see the attitude of the author toward his own work and to gauge his caliber. Look carefully at the table of contents to determine the scope of the undertaking and the presence or absence of logical arrangement in the presentation. Is it a collection of essays or a systematic development? By this time you may have decided, within ten minutes, that the book will not repay your reading. If you decide otherwise, concentrate on the presentation of, and conclusion on, the point or points that concern you, making notes in the book, if it is your own, or in your note-book. At the end, sum up in a few sentences your reaction upon the book as a whole, and put it where it belongs on your shelves for possible future use. A book without an index loses half its reference value.

The matter of note-making is a considerable art in itself. Not industry so much as judgment makes the good note-book. If we could remember everything we learn likely to prove

of future use to us, a note-book would not be necessary. Judgment appears in selecting those things likely to be forgotten and yet likely to be wanted. A note-book is not for exhibition nor for storage, but for use. Put into it the things you do not want to escape you, the essential points, not elaborate verbatim quotations, but facts and inferences, good phrases and summaries. Especially include exact references to author, title, page, with place and date of publication. And by some such device as a loose-leaf system keep pages together that belong together. When you come to write, your notes are your main reliance, in case you are not writing fiction.

The Making of Notes

"When you come to write." It is an impotent feeling that leads one to stare at a blank sheet of white paper with one's theme at the top and not an idea in one's mind. Such a beginning is wrong. Rather, carry your theme for days in your subconsciousness while it grows, and while you note casual references to it. Jot down thoughts regarding it as they rise in consciousness; such

Writing a Paper

thoughts are really incubated by the brain associations formed by all your past study and experience. Then, order these thoughts of your own logically on paper as an outline. Then, read all you possibly can from good authorities on the subject, collecting also material from your own note-books. Then rearrange your outline, introducing this new material where it belongs. Then, finally, when your brain is rested and your mind unharassed, write yourself out with such power of thought and such finish of form as you can command. By the use of some such procedure as this you will always be original to a degree, you will always have something to say in the body of your composition, you will embody logic in your presentation, and you may come even to experience the highest pleasure, — that of artistic self-expression. In any case you will not have lost your individuality and you can say with the English philosopher, Hobbes, "If I had read as much as other men, I should still be as ignorant as they." It is due yourself not to quote much, lest you appear the ass in the

lion's skin; it is due your sources that you cite them frequently and exactly; and it is due both to yourself and to them that you never quote without quotation marks. Finally, regard writing as an opportunity, not as a task, — an opportunity to use what you have learned, and so to know it better, to keep it longer, and perchance even to give some pleasure and profit to others.

Strictly speaking, I suppose the art of writing a paper has little to do with the art of study; but it may be observed, in justification of the paragraphs above, that it has a good deal to do with the practical use of the results of study.

Guiding the Study Process

Life itself is a vast school, and its lessons we are all set to learn by experience and study. Living is a process of doing illumined and reënforced by thinking. Since study is thus a continuing element in the life process, it is important that we guide it with the proper patience and perseverance and otherwise aright. Do first the thing that needs to be done first; face all your immediate duties squarely and select the most pressing one for first performance;

First Things First!

it may be one that has waited long; and it will certainly require effort to do it in the face of the pleasure afforded human nature in doing "something else," good perhaps in itself, but not requiring immediate performance. There is no future day when it will be quite so easy to do a present duty as to-day.

Hard Problems

Attack a problem that is hard for you. It means the growth of mental grasp. To do always only the things easy for you to do is the death-knell of the mind's power.

Great Books

Read the great books, — those that make a difference in your thinking, feeling, and acting; for example, the writings of Descartes and Locke, referred to at the end of this chapter, on the very topic of study.

Avoid Fatigue

Watch the signs of fatigue.[1] It does not pay to study when your brain or body or both are not in good condition. When you feel you cannot quit, it is already past time to quit. The extra hour beyond the fatigue limit demands more than a normal hour's energy; besides, it fills the body with

[1] Cf. Mosso, Fatigue.

toxic acids from whose deleterious effects you cannot recover in a night. Always stop in time not to suffer to-morrow, viewing your task as that of a lifetime, not as that of a day.

Do not let yourself be overburdened through your desire and willingness to do all the good you can in the world. There is also a duty at a certain point discoverable by you, as Horace Bushnell said, of "not doing any more good." But be thorough in what you do undertake and so avoid what Dean Hodges calls "the immorality of second best."

Do Much, not Many Things

You must also treat your body right. We are rather souls with bodies as instruments, than bodies with souls as feeling-centres. Care for your body as you would for your trusty servant whose very life is to do your bidding. This suggestion harks back to "the physical conditions of study" described above.

Regard the Physical

Finally, love your study. A life of study or of listless existence is behind every opinion we express, every piece of work we do. The

rewards of the teacher's profession are not silver and gold. They include the hearts of our students, our long vacations with opportunities for recreation and travel, and, not least, what Professor Palmer calls "the life of enriching study."

Love your Work

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Questions on the Art of Studying

1. What are some signs of a new interest in studying?
2. What is the source of greatest waste in present-day education?
3. Define study.
4. Give and criticise Hinsdale's definition of study.
5. Name six general presuppositions of study.
6. Why be independent in studying?
7. If study is a habit, why should it also be an ideal?
8. Name three mechanical aids to study.
9. Name four physical conditions of study.
10. What are the Herbartian "formal steps" in teaching?
11. What are some weaknesses of these steps as a guide to study?
12. What are the four phases of the study process? Illustrate.
13. What elements may enter into the hunt for the solution of a problem?

14. Compare McMurry's list of eight factors in study with the list of four given in the text.

15. What are the four steps in mastering a sufficiently long lesson in a text?

16. What is meant by studying leisurely?

17. Give several reasons why it is not easy for children to learn to study.

18. How early may children be taught to study?

19. By whom and when should children be taught to study?

20. What are the advantages of teachers studying with the pupils?

21. How may teachers help pupils in each of the four factors of study?

22. How should parents help children study in the home?

23. Show how the four factors of study reappear in good teaching.

24. What, in brief, is the psychology of learning?

25. What is the right attitude toward texts?

26. How does variety of presentation in teaching aid study?

27. What are the characteristics of a good examination?

28. How may we place responsibility on children for study?

29. What are the good effects of the teacher being also a student?

30. What characteristic of the teacher does Herbart emphasize?

31. What are some principles of teaching and studying growing out of our discussion?

32. Name five results of study.

33. What are the points to be observed in mastering a new book?

34. Describe a good note-book.

35. What is a desirable procedure in writing a paper?

36. In what ways should we guide the study process?

Suggestions for Further Study

1. Estimate Bacon's Essay: "Of Studies."

2. Give Locke's account of Study.

3. What are the main principles in Descartes' Discourse on Method?

4. Enumerate the sources of waste in modern education.

5. Is study a means or an end?

6. To what extent are "the roots of learning bitter"?

7. What difference would it make if men loved the truth?

8. On what point in philosophy did Aristotle differ from Plato?

9. What are the advantages and disadvantages of having a weekly program of work?

10. Herbart's own exposition of the formal steps of method. (See his Outlines of Educational Doctrine.)

11. Give further illustrations of the four phases of the study process.

12. Distinguish sharply the second and the third of these phases.

13. Compare McMurry's views on "How to Study" with Dewey's on "How We Think."

14. Compare the four phases of study with the four adaptations of these in mastering a lesson in a text.

15. How does the age of pupils affect each of the four factors of study?

16. Should schools give credit for work done in the home?

17. To what extent is good teaching an aid to right study?

18. Does the best teaching proceed first from the whole to the part or from the part to the whole?

19. Name some characteristics of good texts.

20. Is it desirable to waive examinations in lieu of high scholastic standing?

21. How may teachers secure volunteer work from pupils?

22. What may teachers do in the way of personal study for themselves?

23. Describe some incorrect views of the minds of children.

24. Write out your reaction on some book you have recently read.

25. What are some mistakes in taking notes?

26. Which is more profitable to a pupil, to be taught how to study, to be told certain useful facts, or to be examined in what he already is supposed to know?

27. What use can you make of this discussion?

INDEX

Abelard, 97.
Æsop, 36.
Alcuin, 93, 121.
Answers, 86, 97, 99.
Application, Mental, in study, 121.
Aristotle, 23, 121, 125, 126, 177.
Arnold, Thos., 150.
Attention, 65.
Aurelius, M., 125.
Auxiliary Question, 68.

Bacon, F., 119, 176.
Bennett, Arnold, 132.
Boy Scouts, 20.
Brevity, in questioning, 85.
Browning, R., 51.
Bryant, S. C., 37, 44.
Bryce, James, 144.
Burroughs, John, 21.
Bushnell, Horace, 173.

Chesterton, G. K., 38.
Cheyne, Canon, 24.
Cicero, 126.
Civilization, and story-telling, 119.
Class management, 65.
Clearness, in questioning, 84.
Comenius, J. A., 152.

Definite questions, 88.
Deliberation, in questioning, 82.
Descartes, 119, 172, 176.
Dewey, J., 177.
Dickens, Charles, 39.
Difficulties, in learning to study, 148.
Diogenes, Laertius, 121.
Dramatizing stories, 47.
Du Bois, Patterson, 69.

Eastman, C. A., 33.
English, good, in answering, 98.
  in questioning, 85.
Erasmus, 118.
Essential questions, 89.
Examinational questions, 77.
Examinations, 162.
Expression, teaching by, 45.

Froebel, 20, 29, 46.

Garman, C. E., 164.
Gilder, R. W., 29.
Goethe, 38.
Good teaching, and study, 157–158.
Graded stories, lists of, 55–60.
"Great Stone Face, The," 27.
Guiding the study process, 171–174.

Hall, G. S., 34.
Haslett, S. B., 37, 44.
Hawthorne, 27.
Herbart, 148, 164, 165, 175, 176, 177.
Herbartian Formula, 134–135.
Herodotus, 24.
Heuristic Questions, 70.
Hinsdale, B. A., 120, 175.
Hobbes, Thos., 170.
Hodges, Geo., 173.
Home, and study, 155.
Homer, 24.
Hopkins, Mark, 111, 116.

How to study, 134–148.
How to study a text, 143–148.
Hubbell, Maj. W. S., 30.
Humor in pupils' answers, 101.

Illustrating stories, 46.
Independence, mental, 124.
Individual capacity, 91.
Interests, many, 123.

James, Wm., 164.
Jesus, 41, 63, 103, 107–110, 116, 117, 126.
Jotham's parable, 41.

Kant, I., 120, 133, 146.
Karl the Great, 167.
Kelvin, Lord, 139.
King, H. C., 145.

La Fontaine, 36.
Lanier, Sidney, 51.
Lawyer, the, as questioner, 111.
Leading questions, 86.
Library, one's own, 130.
Lighting, 132.
Lincoln, 29, 73, 116.
Locke, 119, 172, 176.
Logical questions, 90.

Mabie, H. W., 50.
Making notes, 169.
Marconi, 138.
Mark, H. T., 42.
Mastering a new book, 167–168.
McMurry, F. M., 141, 142, 155, 156, 176, 177.
Mill, J. S., 152.
Milton, 38, 144.
Morgan, W. H., 150.
Müller, Max, 129.
Münsterberg, H., 165.

Nathan and David, 43.
New interest in studying, 118.

Oral and written answers, 99.

Painter, F. V. N., 51.
Palmer, G. H., 174.
Paulsen, Fr., 124.
Personal magnetism, 40.
Plato, 62, 63, 104, 106, 125, 126, 177.
Plutarch, 36, 121.
Presentation, 161.
Presuppositions of study, 122–129.
Primitive man, 31–34.
Principles of teaching, 165.
Program of work, 131.

Question, content of, 87.
  form of, 84.
  kinds of, 68.
Questioner, 91.
Questioning, importance of, 64.
  manner of, 80.
  purposes of, 67.
  references on, 114–115.
Questions, general and specific, 82.
  on questioning, 115–117.
  on studying, 175.
  on story-telling, 60.
Quintilian, 95.

Reactions of children on stories, 45.
Readiness to answer, 94.
References, on questioning, 114.
  on story-telling, 53.
  on study, 174–175.
Religious and moral education, 34–35.
Repetition, in questioning, 81.
Research, 138.
Responsibility, 163.
Re-telling stories, 46.
Review questions, 74.
Robinson, J. H., 32.
Rousseau, 96.

Self-criticism, 96.
Seton, Ernest Thompson, 21.

Socrates, 62, 63, 103–107, 108, 109, 110, 116, 117.
Spencer, H., 158.
Stimulating questions, 88.
St. John, E. P., 26, 28, 37.
Stories, illustrations of, 22.
Story, adaptability of, 36.
  characteristics of, 37–39.
  defined, 23.
  fact and fancy in, 25.
  form of, 26.
  how to tell a, 40–44.
  importance of, 31–37.
  place of, in education, 48.
  revival of the, 20.
Story Hour, The, 20.
Story Tellers' League, The, 20.
Story Tellers' Magazine, The, 20.
Story-telling, the purpose of, 28.
Study, defined, 120–122.
  four phases of, 136.
  habit of, 127.
  how to study, 139–141.
  ideal of, 128.
  life of, 122.
  mechanical aids to, 129–131.
  physical conditions of, 131–133.
  results of, 166.
  with pupils, 151.
Suggestions, for self-training, 49.
Sympathy, in questioning, 80.

Teacher, as student, 163.
Teaching, good, and questioning, 66.
Temperature, 133.
Texts, right attitude toward, 160.
Thomson, J. J., 139.
Thought-provoking questions, 90.
Tobey, Marian E., 55.
Training pupils to study, 149.
Truth, and freedom, 126.
  its simplest vehicle, 34.
  love of, 125.
Twain, Mark, 126.

Variety in questioning, 83.
Venerable Bede, 93.
Ventilation, 133.

Wagner, 38.
Washington, 117.
Waste in education, 119.
Wellman, F. L., 112.
Wiggin, K. D., 50.
Wilson, McLandburgh, 52.
Writing a paper, 169.
Wyche, R. T., 20.

Xenophon, 103, 110, 117.

Ziller, Tuiskon, 68, 117.

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